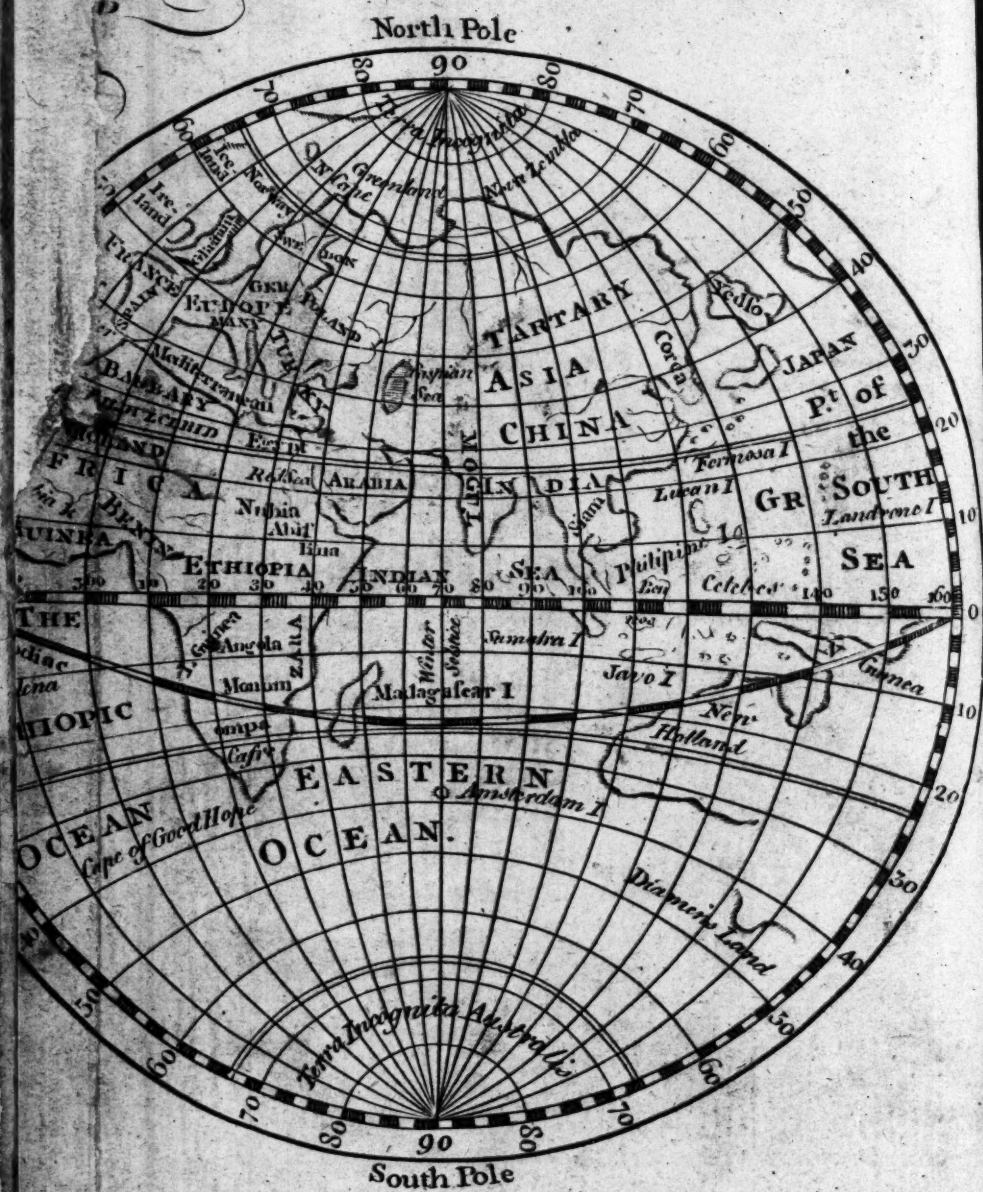
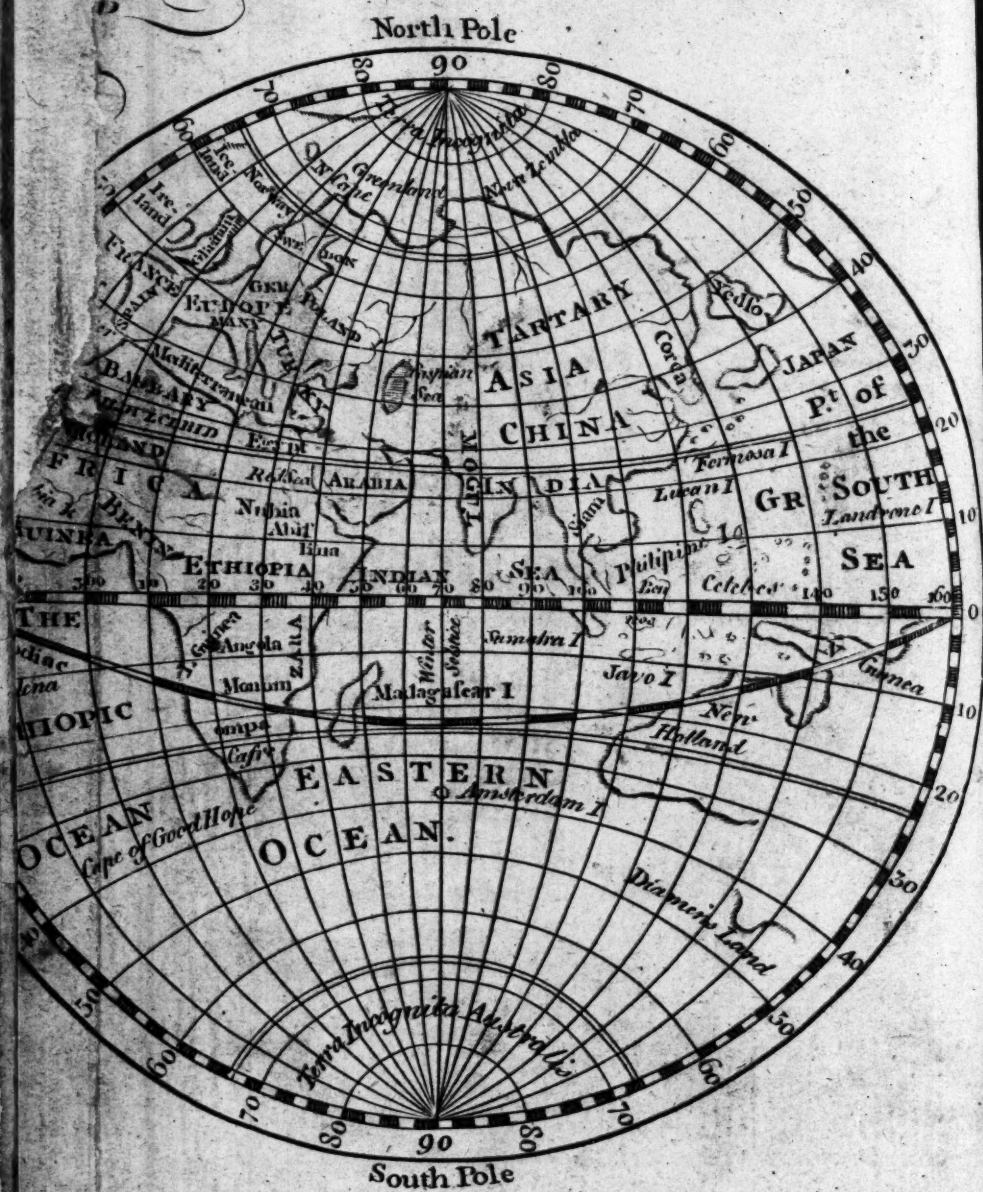






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A COMPANION TO THE

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TABLES

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BY

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A COMPENDIOUS ENGLISH GRAMMAR.

GRAMMAR, in any language, is that art or science that teacheth the true and proper use of letters, syllables, words and sentences. And tho' several rules and observations, applicable only to one particular speech or tongue, are different from those of another, yet such as concern the general relation, that things have to their modes, qualities, motions or passions, are exactly the same in all the languages in the world; for any name, quality, &c. in the English language is the same in any other, though expressed in a different term. From whence may be perceived, how far the generality of people are mistaken, in the notion they have, that it is absolutely necessary for all young persons to read the Latin or Lilly's grammar, before they can attain to a right understanding of the English: for all the grammars of the Latin tongue are mostly employed to teach the various terminations, &c. of the flexions, modes, formations, and words of that language, a matter which in no way concerns the English. But there are some few general rules in that and all other grammars that may be applied to the English, or any other language whatever.

I shall not here enter into a critical dissertation upon each letter, divide them into vowels, consonants, mutes, liquids, &c. nor shall I divide the language into eight parts, as is generally done, but into four, viz.

NAMES.	AFFIRMATIONS.
QUALITIES	PARTICLES, or the manner of words.

Names express the things themselves, *i. e.* every thing that is the object of our several senses, reflection, and understanding: which conveying some certain idea or image to the mind, want not the help of any other word to make them understood: as when we hear any one say, *a man, a horse, virtue, vice, &c.* we perfectly understand what he means.

Names express the things themselves, you cannot therefore put the word *thing* after them thus, *man thing, virtue thing, &c.* without making nonsense.

They admit of *a* or *the* before them, and *an* when they begin with a vowel.

There are two sort of Names, Common Names are such as agree to, or express the whole species; as the name *horse* signifies *my horse, your horse, and all the horses, that are.*

Proper Names distinguish particulars of the species from each other, as *Cæsar, Pompey, Cato*, distinguish those men from the rest of mankind. The same holds of the proper names of *cities, towns, mountains, rivers, countries, &c.*

Qualities are the manners of Names, or things expressed by them, as *good, bad, round, square, &c.* For example: the being of *wax*, is the substance of *wax*, or *wax* itself, without regard to any form or colour, and is what we call the name, the roundness squareness, &c. of the figure are the manners of the being; as to be ignorant or knowing, are the manners or qualities of our being: thus we say a *good, bad, black, white* &c. horse; *horse* is the name, and *good, bad, black, white, &c.* are the qualities of that name.

The 3^d general head is the Affirmation, under which term the existence, action, or passion of the subject is affirmed, as *the black horse runs, the common-sewer stinks, the young child cries.* Here *black, common* and *young* are qualities, as expressing some mode or quality of their subjects or names, *horse, sewer, and child*; and the words *runs, stinks, and cries* denoting the several actions of their subjects or names. It is usual to call

these by three different appellations, viz. *substantive*, *active*, and *passive*; those that are found to signify the being or existence of any thing, as *I am*, &c. are termed *substantives*; those that signify the acting or doing of any thing, as *I see*, &c. are termed *actives*; where passion or the suffering of any thing is signified, as *I am seen*, &c. they are *passives*.

The 4th class of words I call by the general name of Particles, which are occasionally made use of to make the sense of the speaker more full, clear, and intelligible, by expressing the manner, or other circumstances of the other words, either by connecting them together, or shewing the manners or qualities of them; viz. *John and Mary strive earnestly*; here, *and earnestly* are particles; and joining the two names *John, Mary*; *earnestly* shewing the mode of their striving.

A substantive has what is called two numbers, the one expressing only some one single thing of a sort or species, as *a man*, the other all above one, as *men*, viz. two, three, twenty, a thousand, &c. and this is called the plural number. The singular number is commonly distinguished by *a*, *an*, or *one*; as *a horse, a man, an image, an idea, one child, one wife*, &c. The plural number is generally known by the words terminating with an *s*, or *es*; but the singular never, but in such as have a plural termination, tho' they have a singular meaning; as, *arm, arms: horse, horses: king, kings, stone, stones*, &c.

There are some exceptions to this general rule, but they are few in comparison to those that it comprehends; such as *ox, oxen: man, men: brother, brethren: cow, cows, or kine: mouse, mice: foot, feet: tooth, teeth: penny, pence*, &c. Singulars which end in *f* or *se*, have their plurals ending in *ves*; as *wife, wives: self, selves: knife, knives: wolf, wolves*, &c. And tho' most words, whose singulars end in *ff*, follow the general rule foregoing; as *muff, muffs*, &c. yet *staff* makes *staves*, according to the latter rule.

Some terminate alike in both numbers, as *one sheep, ten sheep: one swine, ten swine*, &c.

There are some words that admit of no singular number, such as *ashes, bowels, cresset*, &c. And on the con-

A Compendious English Grammar.

trary there are a great many that want the plural number; such as proper names of men, women, places, creatures and things; as also their virtues, vices, habits, and abstract qualities, the generality of grains, spices, herbs, drugs and liquids, as, *wheat, rye, pepper, ginger, grass, air, blood, milk, &c.*

To the English language there belong three genders, which in conformity to the custom used in the Greek and Latin tongues, may be called *masculine, feminine* and *neuter*; the *masculine* comprehending all males, *feminine* all females, and the *neuter* all things without life; and these are thus distinguished by these terms, *he, his* or *him*, for the *masculine*; *she, her, hers, &c.* for the *feminine*; and *it* for the *neuter*, but the quality remains the same, and is as applicable to males as females, or things without life called *neuters*, as *a good boy, a good girl, a good knife, &c.*

Some *feminines* are formed by changing the termination of the *masculine* into *ess*, as *count, countess*; *duke, duchess*; *heir, heiress*; *lion, lioness, &c.*

The English language has three persons, viz. *I*, the first; *thou*, the second; *he, she, it*, the third, in the singular number; and *we, ye, you, these*, in the plural;

to which may be added *who, whom* or *whom*. These distinctions are absolutely necessary, as appears from the nature of speech, which is always employed about the person or persons, then immediately speaking, denoted by the characteristic *I* or *we*; the person or thing spoken to, by *thou, ye* or *you*; or the person or thing spoken of, by *he, she, it, they, &c.* This is to be understood when they stand before an affirmation, as *I write, thou writest, he writeth*, but in compound sentences, and after affirmations, they are changed into *me, thee, him, &c.* as, *I can prove this horse belongs to me, thee, &c.*

All qualities in English are the same in both numbers; as *a good man, ten good men, &c.* and unless some name be joined with it, to determine what quality it is to be understood of, it can never make the sense complete; as, *good, bad, &c.* have no meaning till applied; as *a good boy, a bad horse, &c.*

When two names are compounded into one word the first becomes a quality, as, *sea-fish, gold-cup, &c.*

My, They, Her, Our, Your, Their, are called *personal possessives*, and are only used when they are joined with names, as, this is my horse, My coat, My book, &c. but when the sense is not expressed immediately, but understood, or a question is asked, they are changed into Mine, Thine, Hers, Yours, Theirs; as, This knife is mine; that is, This is my knife; Whose knife is this? Mine, or, It is my knife, &c.

To qualities belong also increase or diminution of the value, goodness or virtue of the names to which they are joined; and these are generally formed by adding *er* and *est* to the plain simple word itself; as Fair, Fairer, Fairest; though sometimes they are made by adding More or Most to the simple word, as Fairer or More fair, Fairest or Most fair: reading and observation will quickly teach any person where to introduce those in the most advantageous place. These four following are irregulars; Good, Better, Best; Bad or Ill, Worse, worst; Little, Less, Least: Much, More, Most.

Instead of the various terminations and declensions, of the other languages, the English use *a* or *the*, *of*, *to*, *by*, *from* or *with*, &c. to distinguish the several circumstances of the Name both when it is alone, and also when it is joined with the Quality in both numbers: as,

Singular number.	Plural number.
<i>A</i> or <i>the</i> man	<i>The</i> men
<i>Of</i> <i>a</i> or <i>the</i> man	<i>Of</i> <i>the</i> men
<i>To</i> <i>a</i> or <i>the</i> man	<i>To</i> <i>the</i> men
<i>By</i> <i>from</i> or <i>with</i> <i>a</i> or <i>the</i> man	<i>By</i> , <i>from</i> or <i>with</i> <i>the</i> men

Singular.	Plural.
<i>A</i> or <i>the</i> good horse, &c.	<i>The</i> good horses, &c.
<i>Of</i> <i>a</i> or <i>the</i> good horse, &c.	<i>Of</i> <i>the</i> good horses, &c.

We have already taken notice that the third class of words, is the affirmation and what its office is; we shall only here observe, that it has *two numbers, time* and *person* belonging to it, by which the being, action or passion of the subject or name is declared or affirmed; for the expressing the true state of the time, there is what are usually called *auxiliaries*, from or by which the times

of other affirmations are expressed, there being only the *present* and the *passing time* naturally arising from the different endings of the words themselves; that is, the present and the passing, or past time, as *love* the present, and *lov'd* or *loved* the passing time. The present time, or the instant in which any thing is actually performing, &c. is distinguished by the words *do*, *doest*, or *doth*, for the singular number; and *do* only for the plural, with the proper personal signs, *I*, *thou*, *he*, *we*, *ye*, *they*, &c. The passing time is an imperfect manner of expressing, and intimates so much, having the sign *did*, or the termination *ed*: the past time shews the action compleat, by affirming something with the sign *have*; there is also what is called the *preterpluperfect tense*, and has the sign *had* affixed to it, the other is the *future tense*, that affirms something *shall* or *will* be hereafter. And tho' there are really but three proper distinctions of time, viz. the present, the past, and the future, yet as our language, as well as others, hath various, terminations, or manners of expression, we shall insert them: as to the distinctions of what is commonly called *moods*, it is undeniably certain that they may be denoted as variously, and be as numerous as the particular circumstances require.

As what is called the *potential* and *subjunctive moods* are an undeniable proof of differing only by some accidental signs; for which reason they are not here enumerated, but called the 1st, 2^d, 3^d and 4th mood. The first declaring or making some positive assertion about, or relating to the subject, or name. The second having only one tense and five persons, and is employed wholly about commanding or ordaining, praying or permitting something to be done without any specification of time. The third may be variously circumstanced, according as it has its expletives adjoining. And the fourth expresses the action barely and indefinitely as to time. The two auxiliaries supply all others, with those tenses or times which they naturally have no proper termination or distinction for, viz. *to have*, by whose assistance all actives are formed, or such as import doing something; and *to be*, from which all passives are formed, that is, such as import suffering or bearing something done to the subject.

The first or indicative mood.

Present tense.		Present tense.	
Singular.		Plural.	
I — have		We — have	
Thou — hast		Ye — have	
He — hath		They — have	
Past tense.		Past tense.	
Singular.		Plural.	
I — had		We — had	
Thou — hadst		Ye — had	
He — had		They — had	
Future tense.		Future tense.	
Singular.		Plural.	
I shall or will have		We } shall or will have	
Thou shalt or wilt have			
He shall or will have			
		Ye }	
		They }	

Some make other distinctions of time, but as they are only a coupling of those together, this short essay will not permit the disquisition; such as *I have had, I had had, &c.*

The second or imperative mood.

Have thou. Let him, her, it have. Let us have. Have ye. Let them have.

The third or subjunctive, potential, &c. mood

Is always distinguished by adding some sign of wishing, power, &c. as *I may or can have; I might, could, should, or ought to have, &c.*

The fourth or infinitive mood.

Is always distinguished by the sign *to*; as *to have, to love, &c.* from this mood that quality called a *participle*, is formed, importing possession; as *having, being, loving, &c.*

The first or indicative, mood.

Present tense.	Present tense.	Past tense.	Past tense.
Singular.	Plural.	Singular.	Plural.
I am	We are	I was	We were
Thou art	Ye are	Thou wast	Ye were
He, she, it is	They are	He was	They were

Future tense.

Future tense.

Singular.

Plural.

*I shall or will be.**We**Thou shalt or wilt be.**Ye**He shall or will be.**They**shall or will be.*

There are other expressions, called tenses, compounded of *have* and this verb ; as, *I have been*, &c. *I had been*, &c.

The second or imperative mood.

Be thou. *Let him, her, it be.* *Let us be.* *Be ye.*
Let them be.

The third or subjunctive, &c. mood.

That I may, can, might, would, could, should or ought to be, &c.

The fourth or infinitive mood.

To be, to have been. *Being.*

From these all other affirmations regular and irregular are formed and completed, to express every possible circumstance of time, action, or passion : as for example.

First Mood.

I love, I have loved, I had loved, I shall or will love

*We**We**We**We**Thou lovest or dost love**Thou lovedst or didst love**Ye love or do love**Ye loved or did love**Thou hast loved**Thou hast loved**Ye have loved**Ye had loved**Thou shalt or wilt love**They shall or will love*

Second Mood.

Love thou ; love he, she, or it, or let him, her, or it love : love we, or let us love ; love ye, love they, or let them love.

Third Mood.

I, thou, he, she, &c. may, can, might, could, &c. love.

Fourth Mood.

To love, loving, &c.

From what has been said, it is observable, that the natural formations are made successively thus : first, something is affirmed by the first person singular ; as *I love*,

then I loved, or did love, then I have or had loved ; and
 afterwards shall or will love. But there are some verbs
 that are irregular, and instead of ending in *ed*, in the 2^d
 and 3^d tenses have particular endings of their own ; as
 I bear, bore, have born ; I beat, have beaten ; I begin,
 have begun ; I behold, have beheld ; I bend, have bent ;
 I bind, have bound ; I bite, have bitten ; I blow, blew,
 have blown ; I bleed, have bled ; I breed, have bred ;
 I bring, have brought ; I break, broke, have broken, I
 am born, was born, have been born ; I buy, have bought ;
 I catch, have caught ; I chide, chid, have chidden ; I
 chuse, chose, have chosen ; I come, came, am come ;
 I cleave, clove, have cloven ; I cut, have cut ; I creep,
 crept or crept, have crept ; I crow, crew ; I dare,
 durst ; I deal, dealt ; I do did, have done ; I drew,
 have drawn ; I dream, dreamt ; I drink, drank have
 drunk ; I drive, drove, have driven ; I do eat, did
 eat, have eaten ; I fall, fell, am fallen ; I feed, fed ;
 I feel, felt ; I do fetch, did fetch ; I fight, have fought ;
 I find, found ; I fling, flung ; I fly, flew, am flown ; I
 fly, fled, am fled ; I forget, forgot, have forgotten ; I
 get, got ; I gave, have given ; I go, went, am gone ; I
 grind, ground ; I grew, grew, am grown ; I hang, hung,
 have hanged ; I have, have ; I hide, hid, have hidden ;
 I hold, held ; I keep, kept ; I know, knew, have
 known ; I lead, led ; I learn, learnt ; I leave, left ; I
 lend, lent ; I do let, did let, have let ; I lie, have lain ;
 I lye, lyed, I lose, lost ; I make, made ; I mean, meant ;
 I meet, met ; I miss, mist or missed ; I owe, have owed ;
 I do, did have put ; I do, did, have read ; I ride, rid,
 have ridden ; I ring, rung ; I rise, rose, am risen ; I do
 did, have run ; I say, said ; I see, saw, have seen ; I
 seek, sought ; I sell, sold ; I send, sent ; I do, did, have
 shed ; I shine, shone ; I shoe, shod, I shoot, shot ; I
 shrink, shrunk ; I sing, sang or sung, I sit, sat or sate ;
 I slay, slew, have slain ; I sleep, slept ; I slide, slid ; I
 sling, slung ; I smell, smelt ; I smite, smote, have smit-
 ten ; I speak, spoke, have spoken ; I spend, spent ; I
 spill, spilled or spilt ; I spin, spun ; I spit, have spit or
 spitten ; I do, did, or have spread ; I spring, or sprung ;
 I spit or spat ; I sow, sowed, have sown ; I stand, stood ;
 I stink, stunk ; I strike, struck, have stricken ; I string,

strung; I swear, swore, have sworn; I do or did sweat, have sweated; I sweep, swept; I swim, swam, have swum; I take, took, have taken; I teach, taught; I tear, tore, have torn; I tell, told; I think, thought; I thrive, throve, have thriven; I throw, threw, have thrown; I tread, trod, have trodden; I understand, understood; I weave, wove, have weaved; I weep, wept; I win, won; I am, was, have been willing; I work, wrought; I wring, wrung; I write, wrote, have written.

The fourth part is here universally called *particles*, under which denomination, all those small words that tie or unite the others together, or that express the modes or manners of words are signified, and which usually, by the common grammarians, are called *adverbs*, *conjunctions*, *prepositions*, and *interjections*. From the due use and connexion of these four parts, are formed sentences; and from a number or multitude of sentences, arise regular discourses, speeches, &c. A sentence consists of three words at least, by which some idea of the mind is expressed; as *lying is hateful*. And this is called a simple sentence, wherein the name or thing is expressed ~~but once~~, and something is affirmed of that subject: first, its being, and next its mode of being, or else some action of the subject passes upon another, or at least is understood so to do. All others are compounded, wherein either the same subject or name is repeated, or different ones affirmed something of, &c. The name ordinarily is placed before the affirmation and is always really expressed or understood so to be; as, *John loves Mary*. And here it must always be observed, that the same number and person, that the name whose action or passion is intended or expressed by the affirmation itself be; as in the example above, the name *John*, is the third person singular, and so is the affirmation *loves*; and in the following sentence, *men love your wives*; the name *men* is the second person plural so is the affirmation. *We admire learning*: here *we* is the first person plural and *admire*, is so also: which is to be observed of all others.



DIRECTIONS

FOR

WRITING.

I shall endeavour to make this performance useful to those who desire to write well for common business; as also to such teachers who want to be instructed in the first principles of the art of writing. And therefore I shall not trouble you with a long, unnecessary account of the dependance of all the letters in the several alphabets upon one another, that being easily discovered (so far as is material) by any one who knows but the fundamental letters of each hand, which I shall only mention, and leave the rest to your own observation.

The several sorts of hands now in use among us, may be divided into two branches, viz. those of absolute use for business, and those which are only ornamental. Those of absolute use may be reckoned six, the round, and Italian, in which most of the common affairs of trade, and the ordinary business of life, are written by all Europeans; the engrossing, square text, court, and chancery hands, in which all the various business of the law is generally transacted, and recorded. The other hands, viz. the old English the Roman and Italian prints, the German text, &c. are only made use of by way of ornament, or curiosity in some particular cases, and therefore the writing of them is not esteemed of such necessity to those who are intended for common business.

The principal things to be aimed at in order to write any hand well, are those two; first, To get an exact no-

tion or idea of a good letter, which may be done by a frequent and nice observation of a correct copy; the other is, To get such a command of hand, as to be able to express, with the pen, that idea upon the paper, which is attained by constant and careful practice after good examples; the learner being first informed of the most necessary things to be observed in his practice of that hand he intends to be master of. I shall therefore.

I. Mention some things to be generally observed in writing.

II. Give some directions for holding the pen.

III. Shew the nature of the pen, with particular rules and proportions for writing each hand.

And, fourth, Lay down some proper directions for young persons, when they first enter upon business, in order to bring them to write a good hand with expedition, and to make them place figures after the most beautiful and practical manner.

I. The essential properties of a good piece of writing are, a due proportion of the character throughout the whole; a just distance between the letters themselves as well as the words; with a natural leaning or inclination of the letters one to another: a clean, smooth stroke, performed with a masterly boldness and freedom, without which, the most regular piece is like a dead corps whose features, tho' they may be exact in symmetry, yet want that spirit which only can render it an object both valuable and delightful.

The proportion of the several letters in most hands, is generally regulated by the *o* and *n*, therefore let the making of them be first carefully practised, and then the other letters which come from them, all which must be of the same width and fulness of strokes as they are of.

The proportion and shape of the letters in any hand, ought to be the same, whether they are written in a large or small size; therefore, let every hand be first learned in a large character, which will not only sooner fix the idea of a good letter in your mind, but also give you a greater freedom, and in a shorter time, than writing to the small will. It is certain, that the letter is always

contained in the greater ; and he that attains to write any hand large, may soon write it as small as he pleases.

Let all strokes, which are the constituent parts of a letter ; or, (as some call them) the body-strokes, be made with the full pen, and of the same thickness one with another as near as is consistent with the nature of the hand you are writing.

Let all the strokes which join the constituent parts of letters, or the letters themselves together, be made with the corner of the pen, and as fine as the hand will admit of ; which strokes must always have some proportion to the body-strokes, and must be thicker, or thinner, according as the character is lesser, or greater : turn not your pen, neither alter the position of your hand, but let it move with a steady, easy motion, and perform every letter without catchings, and convulsive flutterings.

Let the fine strokes answer one another, in a kind of opposition, and in many hands run parallel.

Let all the letters which have not stems above or below the line, be even at top and bottom. Let those which have stems above the other letters be equal in length to *l*, except *t*, and a few other letters in some hands. Let those which have stems below the line, be equal in length to the *j*, some few excepted, which may be seen by the alphabets of the several hands in the examples.

Let the capital letters be equal in height to the little *l*, and a small matter stronger.

Let the distance between words be double to that between letters.

Let the lines be of such a distance that the stems of the letters may not interfere one with another ; to prevent which they must be at least twice the length of an *l* asunder.

II. The next thing is, directions for holding the pen, and sitting to write.

Hold your pen between the two fore-fingers extended almost straight, and the thumb bending a little outward, and in your right hand, with the hollow side of the pen downwards, and the nib flat upon the paper ; let it rest between the two upper joints of the fore-finger, and upon the end of the middle one, about an inch from

the nib of the pen, the ends of the little finger, and that which is next to it, bend in towards the palm of the hand, about half an inch distant from the end of the middle finger.

Let the book or paper ly directly before you, and your hand rest only on the top of your little finger; let no other part of your hand or wrist touch the paper or desk; rest your arm very lightly between the wrist and elbow. Keep your body upright, and from touching the desk; let your elbow be almost close to your side, and the pen pointed towards the outer part of your left shoulder; so that a line being drawn from the inner part of the arm, at the bend of the elbow to the nib of the pen, will be nearly at right angles with the line you are writing upon. And for the slope hands, turn your left side a little towards the desk; but the upright ones, let the body be directly before it, and the right elbow turned outwards from your side: so that a right line being drawn from the inner bend of the elbow to the nib of the pen, will make an angle, near 45 degrees, with the line you are writing upon. Let the weight of your body rest upon your left arm, and the paper be kept down with your left hand.

Take care of pressing hard upon your pen in writing any hand.

III. As to the nature of the pen, and the particular rules and proportions for writing each hand, though they might be swelled up to a very great number, by enlarging upon every critical nicety, yet I shall deliver only such, as, in my judgment, are most necessary, most beautiful, and most applicable to expeditious practice.

Make the nib of your pen for the round and round text hands the breadth of the full stroke; and that part lying next the hand somewhat shorter and narrower.

For the Italian hand make the nib somewhat finer, and the slit longer.

Note, in writing, where figures are intermixed, they must always slope.

Your figures likewise must be larger than your writing.

When your figures are ranged in columns make them upright.

To make a PEN.

TAKE the first, second, or third quills in the wing of a goose or raven (those that are round, clip and clean are the best :) when you have scrap'd off the thin rind thereof, with the back-edge of your pen-knife, hold it in your left hand with the feather end from you, then enter the back thereof sloping, and cut off as much in length, as the quill is in breadth, and answer that with another cut on the inside, like an opposite to the former ; then turn the quill, and enter the edge of your pen-knife even in the back thereof, and exactly in the midst of the half round, neither inclining the blade one way or other, that the slit may not be made awry. Then put in the peg of your knife haft, if it has one for that purpose, or the end of a whole quill, and with a sudden twitch, force up the slit, holding your left hand thumb hard upon the back of the quill, to put a stop how far the slit shall go. This being done, enter your knife sloping in the other side above the slit, about twice the breadth of the quill, and cut away the cradle-piece ; then turn the back upwards, and cut down to the end of the slit, the cheek or shoulder-piece ; and in so doing turn the knife on both sides towards the back. After this, place the inside of the end or nib of the pen, upon the nail of your left hand thumb, holding the quill fast between the fore-finger and middle finger of that hand. Lastly, to finish the nib, enter the edge of the knife on the back, and near the end thereof sloping, and immediately turning the edge almost downright, cut it off.

There are four considerations belonging to the quill.

If the quill be too hard, steep it a while in water.

If it be too soft, harden it with embers.

If it be too thick, pare a small quantity from the back of the nib.

If it be too thin and weak, strengthen the pen with a short slit, a short nib, and broad shoulder.

Best BLACK INK.

TO six quarts of rain or river water (but rain water is the best) put one pound and a half of fresh blue galls of Aleppo (for those of Smyrna are not strong enough) bruised pretty small, eight ounces of copperas, clean, rocky and green, eight ounces of rock allum: let these stand together in a large stone bottle, or clean stone pot, or earthen pot, with a narrow mouth to keep it free from dust, shake, rowl, and stir it well once every day, and you will have fine ink in about a month's time, and the older it grows, the better it will be for use.

Ingredients for a Quart.

One quart of water, four ounces of galls, two ounces of copperas, and two ounces of gum, mixed and stirred as above.

LONDON INK POWDER.

TAKE ten ounces of the clearest nut-galls, bruise them, and sift the powder very fine, then add white copperas two ounces, Roman vitriol three ounces, gum arabick or sandarack an ounce, bruise and sift them very fine, so that tho' they appear white, a little being put into water, will in a little time turn it, and an ounce of powder will make a pint of very black ink.

JAPAN or SHINING INK.

TAKE gum arabick and Roman vitriol, of each an ounce, galls well bruised a pound, put them into rape vinegar, or vinegar made of clear small beer; let them remain in a warm place, often stirring, till the liquor becomes black, then add to a gallon, an ounce of ivory black and a quarter of a pint of seed lac varnish, and it will be a curious black shining ink.

A Powder Ink to rub on paper, and write on.

BRUISE about twenty nut galls, and half an ounce of Roman vitriol, as much gum arabick and gum sandarack, mingle these finely together, when well bruised and sifted to powder, rub the paper hard with it with cotton wool, and polishing it with a piece of ivory, write with water, and in a little time the letters you write will appear a fair black, as if written with the best ink.

To make RED INK.

TAKE three pints of stale beer (rather than vinegar) and four ounces of ground brazile wood, simmer them together for an hour, then put in four ounces of roch allum, and these three are to simmer together for half an hour, and then strain it through a flannel, and bottle it up, well stopp'd for use.

To keep INK from freezing or moulding.

IN hard frosty weather, ink will be apt to freeze; which, if once it doth, it will be good for nothing; for it takes away all its blackness and beauty: to prevent which, if you have not the conveniency of keeping it warm, or from the cold, put a few drops of brandy, or other spirits, into it, and it will not freeze. And to hinder its moulding, put a little salt therein.



COPIES for WRITING.

Single COPIES in prose, in an alphabetical order.

A

A Wise man's anger is of short continuance
Accustom your children to a true notion of things
Adversity is the touchstone of friendship
Approve not of that man who commends all you say
A flattering companion is a dangerous enemy

B 3

A wise man governs with ease, and is obey'd with pleasure

A covetous man is always in want

Add to your faith, virtue, and to virtue, knowledge

A prudent man values content more than riches

A virtuous mind is rather to be chosen than promotion

Authority is the main point in government

Abstain from all appearance of evil

A merry heart maketh a chearful countenance

Anger reffecth in the bosom of fools

A soft answer turneth away wrath

Adversity makes a man wise, rather than riches.

Advice comes too late when a thing is done.

B

BE more afraid, of secret sins, than open shame

Brave spirits promote the public good

Be patient in adversity, and humble in prosperity

Beauty without virtue is like a painted sepulchre

Be less confident and more diligent

By learning to obey, you shall know how to command

Brave men will do nothing unbecoming themselves.

By diligence and industry we come to preferment

Buy thou the truth, and sell it not.

C

CONTENTMENT makes a man happy without a fortune

Childern require instruction as well as provision

Commit not that to another, that you can do yourself

Custom in infancy, becomes nature in old age

Chide him not too much, who confesses his fault

Courtesy and humility are marks of gentility

Confession of a fault makes half amends for it

Contentment is preferable to riches and honour

Consider the shortness of life, and certainty of death

Competency with content is a great happiness.

D

DEATH destroys not the soul, but an ill life does

Delight in what you undertake to learn

Drinking is the drowning of cares, not the cure of them

COPIES for WRITING.

19

Do unto others as you would have them do unto you.
Death will comfortably end a well spent life
Devise not evil against thy neighbour
Do not render evil for evil unto any man
Drunkenness reveals what soberness conceals
Do not govern your life by fancy, but by reason
Delay in many cases is dangerous

E

EVERY delay of repentance is a cheat upon ourselves

Education is that which maketh the man
Every prudent man dealeth with knowledge
Exalt wisdom, and she shall promote thee
Ease and honour are seldom bed-fellows
Evil company makes the good bad, and the bad worse
Every idle thought to judgment muſt be brought

F

FORSAKE the foolish, and go in the way of understanding

Follow the dictates of reason, and you are safe
Forget not God in your mirth, nor yourself in your anger
First learn to obey, before you pretend to govern
Feed your body as your slave, not as your master
Fools make a mock at sin
Few do good with what they have gotten ill
Future events muſt be left to providence
Frugality and industry are the hands of fortune.

G

GIVE God the first and last of each day's thought:
Grieve not for those things which are out of your power

Great sins require great repentance
Good education is the foundation of man's happiness
Give as chearfully as you receive
God often corrects us in this life to save us in the next
God is our refuge, a very prudent help in trouble
Good manners, grace and truth are ornaments in youth
Greater profit doth always come of learning than of play

Good men are safe when wicked men are at odds.

H

HE that will not work should not eat.
 Happiness is desired by all, but obtained by few.
 He is in some degree wise that conceals his ignorance.
 He that begins well has done half the work.
 Hear both parties before you give judgment.
 He that boasts in his sins glories in his shame.
 He never wants comfort that has content.
 Hear, ye children, the instruction of a father.
 Hear instruction; be wise, and refuse it not.
 He that sins against conscience, sins with a witness.
 He that swims in sin must sink in sorrow.

I

IF riches encrease, set not your heart upon them.
 In prosperity prepare for adversity.
 Idleness has no advocate, but many friends.
 It requires as much care to keep, as to get an estate.
 Industry keeps the mind clear, and the body healthy.
 In the multitude of counsellors there is safety.
 Industry is fortune's right hand, and frugality her left.
 Instruction and a good education is a durable portion.
 It is good to have a friend, but bad to need him.

K

KEEP back thy servant from presumptuous sins.
 Knowledge is the treasure of the mind.
 Know when to speak and when to hold your tongue.
 Keep company with those who may make you better.
 Keep thy tongue a prisoner, that thy body may go free.
 Knowledge puffs up some men and humbles others.
 Keep thy tongue from evil, and thy lips from guile.
 Keep good company, and you shall be of that number.
 Keep a close mouth, if you would have a wise head.
 Keep at a distance from ill company.
 Kings may win crowns, but cannot conquer death.

L

LEARNING is the ornament of youth, and comfort
 of age.

Lament not the loss of that which ye cannot retrieve
 Lying lips are an abomination to the Lord
 Let another man praise thee, and not thy own mouth
 Love not sleep, lest thou come to poverty
 Life without a friend, is death with a witness
 Learn to live as ye would wish to die
 Liberty is grateful to all but destructive to many
 Let not the work of the day be put off till to-morrow

M

MERCY and truth shall follow them who devise
 good

Man has much to learn, but a short while to live
 Malice seldom wants a mark to shoot at
 Make provision for want in time of plenty
 My son, if sinners entice thee, consent thou not
 My son, gather instruction from thy youth up
 Many know good, but do not the good they know
 Many live beggars all their life, that they may not die so
 Many are led by the ears more than by the understanding
 Many are made saints on earth, that never reach heaven
 Mend your manners, and that will mend your fortune

N

NCESSITY is commonly the mother of invention
 No torments are so great, but patience may vanquish

Nothing is more contagious than an ill example
 Not to grow better is commonly to grow worse
 No man hath seen God at any time
 None should covet what cannot possibly be had
 Nothing is constant in this uncertain world
 Nothing is so hard, but diligence may overcome
 Nature seldom changes with the climate

O

OUR life here is but a journey to the next world
 Of all prodigality, that of time is worst
 One vice is more expensive than ten virtues
 One fault cannot justify the commission of another
 One bad companion may ruin many good men

Of all poverty, that of the mind is most deplorable
 Of all things, death should never be forgot
 Only by pride cometh contention
 Once well done is twice done
 On present time depends our future state
 Other peoples deaths should be momento's to our own

P

PROVIDENCE consults our wants, not wantonness
 Prosperity gains friends, and adversity tries them
 Passion is a bad counsellor and as ill a speaker
 Pride, like a wild horte, overthrows his rider
 Pursue useful and profitable studies
 Poverty and shame attend those that refuse instruction
 Provide against the worst, and hope for the best
 Poor men want many things, but covetous men all
 Put not off the main business of life to the very article
 of death
 Poor freedom is better than rich slavery.

Q

QUENCH not the spirit, pray without ceasing
 Quick at meat, quick at work
 Quench not your desires when they tend to good
 Quick promisers are slow performers
 Quietness and content are mates most excellent
 Quiet men have quiet minds, and enjoy content
 Quarrellsome persons sometimes meet with their match.

R

REPENTANCE is the physic of the soul
 Remember not the sins of my youth
 Religion is the best understood when most practised
 Revenge not injuries, but forgive them
 Reality is now, become a great rarity
 Riches profit not in the day of wrath
 Remember thy Creator in the days of thy youth
 Remember your duty to God, your neighbour, and
 yourself
 Repent to day, to-morrow may be too late.

S

SHAME and disgrace shall be the portion of fools
 Sin goes before, and shame certainly follows after
 Silence is an antidote against an envious tongue
 Saying and doing should be but one man's office
 Shew me a liar, and I will shew you a thief
 Sin and sorrow are inseparable companions
 Soft words sometimes work upon the proudest hearts

T

THERE are none so poor as those whom God hates
 The hope of reward sweetens labour
 To praise yourself is the way to be dispraised
 The power of example prevails more than precept
 Truth is ashamed of nothing but to be hid
 The worth of a thing is best known by the want of it
 Those who wo'nt mend to-day, shall have more work
 to-morrow
 The doing nothing is very near doing evil
 To do good is the way to find it
 Time and tide will for no man stay

U

USE soft words and hard arguments
 Unlawful love ends generally in bitterness
 Unto the upright there rises light in darkness
 Undertake deliberately, and execute vigorously
 Unsanctified prosperity is the bane of virtue
 Unto thee will I cry, O Lord, be not silent to me
 Unwillingly go to law, and willingly make an end.

V

VIRTUE is commended of all, but followed by few
 Value not yourself by another man's opinion
 Virtue often suffers, when vice goes unpunished
 Valour can do little without discretion
 Virtue to noblest acts the mind inclines
 Variety is the beauty of the world
 Virtue is first to be fought and money next.

W

WISE men keep their expences short of their income
 Whatever is forbidden in act is also in thought
 Wicked practices discover bad principles
 Would you be wise, endeavour to be good
 Wisdom to the mind is like health to the body
 We must not blame fortune for our own faults
 Would you be rich, be industrious; if wise, be studious
 Where there is no fault, there needs no pardon
 When passion rides then give reason the reins

X

XERXES wept at the thoughts that his vast army
 would be dead in 100 years
 Xenophon accounted the wise man happy
 Xenophon was a learned general
 Xerxes whipt the sea, because it would not obey his
 command
 Xerxes wept at the changeable state of man.

Y

YOUNG men see that you honour the aged
 Youth is full of disorder and age of infirmity
 You may know men by the company they keep
 Young men go to death but death goes to old men
 Young men in strength should provide against age and
 weakness
 Your vice, and not your poverty, is your shame
 You must crack the shell before you can have the ker-
 nel
 Yield quietly to what must come unavoidably.

Z

ZEALOUSLY strive for an eternal crown
 Zeal grounded on knowledge enlivens devotion
 Zeal for religion cannot warrant revenge
 Zeal in a good cause, commands applause
 Zeal without knowledge is but religious wild-fire
 Zeal, if not rightly directed, is very pernicious.

AS you expect that men should deal by you,
So deal by them, and give each man his due,
Better it is to gain great reputation.
Than heap up wealth with trouble and vexation.
Constraint in all things makes the pleasure less :
Sweet is the love that comes with willingness.
Despair of nothing that you would attain :
Unweary'd diligence your point will gain.
Experience best is gain'd without much cost :
Read men and books ; then practise what thou know'st.
Fortune may sometimes prove true virtue's foe,
But cannot work her utter overthrow.
Greatness in virtue only's understood :
None's truly great, that is not truly good.
Honour's a god that none but fools adore :
The wise have nobler happiness in store.
If all mankind would live in mutual love,
This world would much resemble that above.
Kingdoms, like private persons, have their fate,
Sometimes in high, sometimes in low estate.
Let each man follow close his proper trade,
And all affairs will soon be better made.
Men's fancies vary strangely, like their faces,
What one commends, another man disgraces.
Number itself is at a loss to guess
Th' endurance of our future happiness.
Oh ! that the sons of men would once be wise,
And learn eternal happiness to prize !
Pray thou to God, that he may be inclin'd
To grant thee health of body and of mind.
Quarrellsome brawling, gaming, fuddling, shun :
Thrice happy they, that ne'er such courses run.
Remember, time will come, when we must give
Account to God, how we on earth do live.
Some men get riches, yet are always poor ;
Some get no riches, yet have all things store.
They that are proud, and other men disdain,
Do often meet with scorn and hate again.
Virtue is prais'd but little practis'd by us :
So loose the age, that few are truly pious.
What's human life ? a day, a race, a span,
A point, a bubble, froth : so vain is man.

Xenophilus did well in health abide

One hundred seven years, and then he dy'd.

Young men, take pains, be brisk, and I'll engage,
Your youthful pains will pleasure yield in age.

Zaleucus made his laws so strict, that those,
Who acted whoredom, both their eyes should lose.



Of the POINTS or STOPS, and other MARKS used in
writing and reading; with their characters, places,
and significations.

THE stops are used to shew what distance of time
must be observed in reading: and they are so ab-
solutely necessary to the better understanding of what
we write, and read, that without a strict attention to
them, all writing would be confused, and liable to many
misconstructions.

Stops, considered as intervals in reading, are but four,
viz. comma, semicolon, colon, and period, or full stop:
and these bear a kind of musical proportion of time one
to another: for a comma stops the reader's voice, while
he may privately, with deliberation, tell one: the semi-
colon, two; the colon, three; and the period, four.

Their characters are thus,

Comma (,) a circular dash at the foot of a word.

Semicolon (;) a point over the comma.

Colon (:) two points.

Period (.) a single point at the foot of a word.

But if a question be asked, there's a circular stroke
upon a short line put over the period, and 'tis called an
interrogation, thus (?).

If a sudden wondering be expressed, then a straight
line is placed over the period, and 'tis called a note of
admiration, thus (!)

If one sentence be enclosed within another, of which
it is no part, then 'tis put between two large half circles

called parenthesis, thus (), and, in reading, this doth something lower the tone of the voice, as a thing, that comes in by the bye, interrupting the main coherence of the period, and restraining it from being taken in so large a sense as it might otherwise bear. Each part of it is equal in time to a comma.

These that follow, are the most usual marks in writing.

Accent (') being placed over a vowel, denotes, that the tone, or stress of the voice in pronouncing, is upon that syllable.

Apostrophe (') a comma at the head of letters, denotes some letter, or letters, left out for quicker pronunciation, as I'll, for I will; wou'd'st, for wouldest; sha'n't, for shall not; ne'er, for never

Asterism (*) a star, guides to some remark in the margin, or at the foot of the page. Several of them set together signify, that there is something wanting defective, or immodest in that passage of the author.

Breve (¨) is a crooked mark over a vowel, and denotes that it is sounded quick or short.

Caret (^) is placed underneath the line, and denotes that some letter, word, or sentence is left out by mistake, and must be taken in exactly where it points.

Circumflex (^) is in the same shape as caret, but is always placed over some vowel of a word, to denote a long syllable.

Dieresis (¨) is two points placed over two vowels of a word, that would otherways make a diphthong, and parts them into two several syllables.

Hyphen (-) is a straight mark a-cross, which, being set at the end of the line, denotes that the syllables of a word are parted, and that the remainder of it is at the beginning of the next line.

Here note, that whenever a word is thus parted, the syllables must be carefully separated by the rules of spelling.

'Tis used also to join, or compound two words into one; as, Ale-house, Inn-keeper.

Being placed over a vowel it is not then properly called a Hyphen, but a Dash, which in writing signifies the omission of m or n; as, Nothing is more comen-

dable than fair writing; for, Nothing is more commendable than fair writing.

Index (☞) the forefinger pointing, signifies that passage to be very remarkable, against which it is placed.

Obelisk (†) is used as well as the asterism *, to refer the reader to the margin. In dictionaries it commonly denotes a word to be obsolete, or less in use.

Paragraph (¶) or division, comprehends several sentences under one head, or subject.

Parenthesis [] or brackets, include words or sentences of the same value and signification with those they are joined to, which may be used in their stead.

Quotation (") or a double comma reverse, at the beginning of a line, shews a passage quoted out of an author in his own words.

Section (§) or division, is used in subdividing of a chapter, or book, into lesser parts or portions.



ABBREVIATIONS.

Abbreviations are very necessary for dispatch of business. For by them, we expeditiously express, or set down a long word, shortening it, by making some initial letter, or letters, belonging to the word, to express it; as in the Table following.

A. B. Artium baccalaureus, or batchelor of arts	Ap. apostle
Abp. archbishop	Adml. admiral
Acct. account	Agt. against
A. D. Anno Domini, or the year of our Lord	Amot. amount
A. M. Anno mundi, or the year of the world	Aug. August
Admsr. administrators	A. R. Anno regni, or in the year of the reign
A. M. Artium magister, or master of arts	B. A. batchelor of arts
Ana. of each a like quantity	B. D. batchelor of divinity
	B. V. blessed virgin
	Bart. baronet
	Bp. bishop

ABBREVIATIONS.

29

C. chapter	Knt. knight
Cant. Canterbury	L. libræ, or pounds
Cent. centum, or hundred	Lieut. lieutenant
Chan. chancellor	L. L. D. legum doctor, or doctor of laws
Chap. chapter	Mar. March
Capt. captain	M. A. master of arts
Cl. clericus, or clerk	Maj. Majesty
Co. company	Monf. monsieur
Col. Colossians. colonel	Mr. master
Comrs. commissioners	Mrs. mistress
Con. Constance	M. D. medicine doctor, or doctor of physick
Cr. creditor	M. S. memoriæ sacrum, or sacred to the memory ; also manuscript
C. C. C. corpus Christi col- lege	N. note
C. S. custos sigilli, or the keeper of the seal	N. B. nota bene, note, mark well, or observe
C. P. S. custos privati si- gilli, or keeper of the privy seal	N. S. new stile
Dr. doctor	No. number
Do. ditto	n. l. non liquit, or it does not appear.
D. denarii, or pence	Nov. or 9ber, November
Dec. or xber, or 10ber, December	Obj. objection
Devon. Devonshire	O. W. old word
Deed. deceased	O. S. old stile
Doct. doctrine	Oct. or 8ber, October
D. D. doctor of divinity	Oxon. Oxford
E. g. exempli grati, or for example	Pd. paid
Esq; elquite	p. per, or by
Exon. Exeter	per ct. per centum, or by the hundred
Feb. February	Parl. parliament
Gent. gentleman	Philom. philomathes, or lo- ver of learning
Hund. hundred	Philo-math. philo-mathe- maticus, or a lover of mathematics
i. e. id est, or that is	P. S. postscript
I. H. S. Jesus hominum sal- vator, or Jesus Saviour of men	Q. question
Inst. instant	
Jan. January	
Jno. John	

q. d. quasi dicat, or as if he should say	theologiæ professor, or professor or doctor of divinity
q. l. quantum libet. or as much as you please	The. Theophilus
q. s. quantum sufficit, or a sufficient quantity	Tho. Thomas
qr. quarter, or farthing	V. verse
Rev. reverend	Viz. videlicet, or to wit, or that is to say
Rob. Robert	Will. or Wm. William
Reg. prof. regus professor	wp. worship
Rt. Hon. right honourable	Xn. christian
S. A. secundum artem, or according to art	Xt. Christ
St. saint	Xtopher. Christopher
Sect. section	ye. the
Sept or 7ber, September	yn. then
Serj. serjeant	yo. you
Serv. Servant	ym. them
Salop. Shropshire	yt. that
Sr. sir	yr. your
ss. semissis, or half a pound	z. zeal
S. S. T. P. sacro sanctæ	&c. et cetera, or and the rest, or and such like



To write on Paper GOLD LETTERS, called SHELL GOLD.

LAY a little leaf gold upon a fine earthen plate, and drop thereon a little clear virgin's honey, then work it up with your clean knife's hilt, until it is stiff like unto a past, which put into an oyster-shell, and do it close; when you are to write with it, put a little gum water on the side of the gold, and mix a little thinly fit for your pen.

How to write SECRET LETTERS.

WRite what you would have seen on one side of the paper with common ink, and on the other side with milk, that which you would have secret; and when

you would make the same legible, direct your friend to hold that side, which is written with ink to the fire, and the milky letters will shew bluish on the other side, and easy to be read.

Another Way.

YOU must write a letter that may carry good sense, to your friend, but let the lines be wide asunder : then between these lines write your secret letter, with gall water only, wherein the galls have been infused but a little time ; for if after you have written with it, there be any sensible colour left upon the paper, you must throw away the water, and make new ; this being dry, and of one colour with the paper, will give no cause of suspicion ; and the rather, because the letter purporteth a sufficient sense already. Now for the discovery of it, you must dissolve some copperas in fair water, and with a fine pensil, dipt in the copperas water, you must moisten the interlining of your letter, and thereby you shall make it legible.

To write both Blue and Red Letters at once, with the same ink and pen, and upon the same paper.

PUT the quantity of a hazel nut of litmose blue to three spoonfuls of conduit water, wherein some gum arabic is dissolved ; and when it hath settled the space of an hour, if you write therewith you shall have perfect blue letters : and if you dip a penoile in the juice of lemons, and wet some part of the paper therewith, and afterwards let your paper dry again, and then write upon the place where the juice of the lemon was laid, with your blue ink, the letters will suddenly become red, and in all the rest of the paper, the letters will be blue,



A Poem in praise of the invention of Writing.

Blest be the man! his memory at least,
 Who found the art, thus to unfold his breast;
 And taught succeeding times an easy way,
 There secret thoughts by letters to convey;
 To baffle absence and secure delight,
 Which till that time was limned to flight.
 The parting farewell spoke and last adieu,
 The less'ning distance past, the loss of view,
 The friend was gone which some kind moments gave,
 And absence separated like the grave.
 When for a wife the youthful patriarch sent,
 The camels jewels, and the steward went,
 And wealthy equipage, though grave and slow,
 But not a line that might the lover show,
 The ring and bracelets woo'd her hands and arms,
 But had she known of melting words the charms
 That under secret seals in ambush lie,
 To catch the soul when drawn into the eye,
 The fair Assyrian had not took his guide,
 Nor her soft heart in chains of pearl been ty'd.



L E T T E R S

On Compliment, Business, and several other
 important Occasions

I Here present you with a collection of useful letters
 on such subjects as may naturally occur to a young
 man, both before, and at his first setting out in the
 world; which, if read attentively, and copied care-
 fully, will soon correct his orthography, amend his
 manner of writing, and serve him to form a tolerable
 stile.

LETTER I.

From a Father to his son, on his keeping bad company,
bad hours, &c. in his apprenticeship.

Dear Son,

I Am very much concerned to hear, that you are of late fallen into bad company; that you keep bad hours; and give great uneasiness to your master, and break the rules of his family: that when he expostulates with you on this occasion, you return pert and bold answers; and, instead of promising or endeavouring to amend, repeat the offence; and have entered into clubs and societies of young fellows, who set at nought all good example, and make such persons as would do their duty the subject of their ridicule, as persons of narrow minds, and who want the courage to do as they do.

Let me, on this occasion, expostulate with you, and set before you the evil of the way you are in.

In the first place: What can you mean by breaking the rules of a family you had bound yourself by contract to observe? Do you think it is honest to break thro' engagements into which you have so solemnly entered; and which are no less the rules of the corporation you are to be one day free of, than those of a private family?—Seven years, several of which are elapsed, are not so long a term but that you may see it determined before you are overfit to be trusted with your own conduct; twenty-one or twenty-two years of age is full early for a young man to be his own master, whatever you may think; and you may surely stay till then, at least, to chuse your own hours, and your own company; and, I fear, as you go on, if you do not mend your ways, your discretion will not then do credit to your choice. Remember, you have no time you can call your own, during the continuance of your contract; and must you abuse your master in a double sense; rob him of his time, especially if any of it be hours of business; rob him of his rest; then break peace in his family, and give a bad example to others? and all for what?

why, to riot in the company of a set of persons, who condemn, as they teach you to do, all order and discipline; who in all likelihood, will lead you into gaming, drinking, swearing, and even more dangerous vices, to the unhinging of your mind from your business, which must be your future support.

Consider, I exhort you, in time, to what these courses many lead you. Consider the affliction you will give to all your friends, by your continuance in them. Lay together the substance of the conversation that passes in a whole evening, with your frothy companions after you are come from them; and reflect what solid truth, what useful lesson, worthy of being inculcated in your future life, that whole evening has afforded you; and consider, whether it is worthy breaking thro' all rule and order for? — whether your present conduct is such as you would allow in a servant of your own? whether you are so capable to pursue your business with that ardour and delight next morning, as if you had not drank, or kept bad hours, over night? if not whether your master has not a double loss and damage from your mis-spent evenings? whether the taking of small liberties, as you may think them, leads not on to greater? for, let me tell you, you will not find it in your power to stop when you will; and then, whether any restraint at all will not in time be irksome to you?

I have gone through the like servitude with pleasure and credit. I found myself my own master full soon for my discretion; what you think of yourself I know not; but I wish you may do as well for your own interest, and reputation too, as I have done for mine; and I'll assure you, I should not have thought it either creditable or honest to do as you do. I could have stood the laugh of an hundred such vain companions as you chuse, for being too narrow minded to break through all moral obligations to my master, in order to shew the bravery of a bad heart, and what an abandoned mind dared to perpetrate. A bad beginning seldom makes a good ending, and if you were assured that you could stop when you came for yourself, which is very improbable, how will you answer it to equity and good conscience, that you will do so for your master? There is, let me tell you, more true bravery of

mind in forbearing to do an injury, than in giving offence.

You are now at an age when you should study to improve, not divert, your faculties. You should now lay in a fund of knowledge, that in time, when ripened by experience, may make you a worthy member of the commonwealth. Do you think you have nothing to learn, either as to your business, or as to forming of your mind? would it not be much better to chuse the silent, the sober conversation of books, than of such companions as never read or think; an author never commits any but his best thoughts to paper; but what can you expect from the laughing noisy company you keep, but frothy prate, indigested notions, and thoughts so unworthy of being remember'd, that it is the greatest kindness to forget them?

Let me intreat you then, my dear son, for your family's sake, or for your own sake, before it be too late; to reflect, as you ought, upon the course you are enter'd into. By applying yourself to books, instead of such vain company, you will be qualified in time for the best of company, and to be respected by all ranks of men. This will keep you out of unnecessary expences, will employ all your leisure time, will exclude a world of temptations, and open and enlarge your notions of men and things, and, finally, set you above that wretched company which now you seem so much delighted with. And one thing let me recommend to you, that you keep a list of the young men of your standing within the compass of your knowledge, and for the next seven years, observe what fate will attend them; see, if those who follow not the course you are so lately entered into, will not appear in a very different light from those who do; and from the industry and prosperity of the one, and the decay or failure of the other (if their vain ways do not blast them before, or as soon as they begin the world) you'll find abundant reason every day to justify the truth of the observations I have thrown together. As nothing but my affection for you could possibly influence me to these expostulations, I hope for a proper effect from them, if you would be thought well of by, or expect any favour from,

Your loving father.

Your master will, at my request, send me word of the success of my remonstrances.

L E T T E R II.

Advice from an uncle to a young beginner, &c.

Dear Thomas,

AS you are now entering into the world, and will probably have considerable dealings in your business, the frequent occasions you will have for advice from others, will make you desirous of singling out among your most intimate acquaintance, one or two whom you would view in the light of friends.

In the choice of these your utmost care and caution will be necessary; for by a little mistake here you can scarcely conceive the fatal effects you may hereafter experience; wherefore it will be proper for you to make a judgment of those who are fit to be your advisers, by the conduct they have observed in their own affairs, and the reputation they bear in the world. For he who has by his own indiscretions undone himself is much fitter to be set up for a land-mark for a prudent mariner to shun his courses, than an example to follow.

Old age is generally slow and heavy, youth headstrong and precipitate: but there are old men who are full of vivacity, and young men replenished with discretion; which makes me rather point out the conduct than the age of persons with whom you should chuse to associate; tho' after all, it is a never failing good sign to me of prudence and virtue in a young man, when his seniors chuse his company, and he delights in theirs.

Let your endeavours therefore be, at all adventures, to consort yourself with men of sobriety, good sense and virtue; for the proverb in an unerring one, that says, A man is known by the company he keeps. If such men you can single out, while you improve by their conversation you will benefit by their advice: and be sure remember one thing, that tho' you must be frank and unreserved in delivering your sentiments, when occasions offer, yet that you be much readier to hear than speak; for to this

purpose it has been significantly observed, that nature has given a man two ears, and but one tongue. Lay in therefore by observation, and a modest silence, such a store of ideas, that you may, at their time of life, make no worse figure than they do; and endeavour to benefit yourself rather by other peoples ills than your own. How must those young men expose themselves to the contempt and ridicule of their seniors, who, having seen little or nothing of the world, are continually shutting out by open mouths, and closed ears, all possibility of instruction, and making vain the principal end of conversation, which is improvement. A silent young man makes generally a wise old one, and never fails of being respected by the best and most prudent men. When therefore you come among strangers, hear every one speak before you deliver your own sentiments; by this means you will judge of the merit and capacities of your company, and avoid exposing yourself, as I have known many do, by shooting out hasty and inconsiderate bolts, which they would have been glad to recal, when perhaps a silent genius in company has burst out upon them with such observations, as have struck consciousness and shame into the forward speaker, if he has not been quite destitute of inward reproach.

I have thrown together, as they occurred, a few thoughts, which may suffice for the present to shew my care and concern for your welfare. I hope you will constantly, from time to time, communicate to me whatever you shall think worthy of my notice, or in which my advice may be of use to you. For I have no pleasure in this life equal to that which the happiness of my relations gives me. And of this you may be assured; for I am, and ever must be,

Your loving uncle.

LETTER III.

General rules of conversation, &c. From a Clergyman to a young Tradesman.

Dear Henry,

AS I had not an opportunity of saying so much to you as I wished when you were last here; I send this to inform you of some things, in your general conversation, which I think would be proper for you to observe and amend; particularly your excessive itch for talking; which discovers itself alike on all occasions. I have always flattered myself, that you do not want sense; and am willing to hope I have not been deceived: but the dangerous self-sufficiency of most young men seems violently to have seized you, which, I hope, a little reflexion will remove.

The art of rendering yourself agreeable in conversation is worth your serious study; 'tis an advantage few can boast, tho' sought after by all; and nothing is so constant an enemy to success in those who would excel in this art, as the harbouring an opinion of their own proficiency, before they have attained to any tolerable degree of knowledge in what they imagine themselves possessed of. Conversation, where it is rightly managed, must be so conducted as to let each member of the company have a share in the pleasure and applause it affords; if you are six in number, after you have told a story, or made any remark which gives a general satisfaction; you must consider it the right of another to call your attention in his turn; and, unless particularly requested, it betrays a great weakness to follow yourself. No doubt you love to be admired; and have not others the same passion? you believe your wit more brilliant than theirs; are you sure that they are not of the same opinion as to their own? If a man speaks little you must not from thence, conclude him willing to give up every claim to conversable merit; perhaps he cannot sing; but to be sure he is as desirous of having his peculiar humour, or his dry joke, applauded, as you are to be intreated another song. If he is no mathematician

perhaps he is versed in religious disputation; if he despises plays, he may admire history; tho' he understand not geography he may yet know how to describe the humours of mankind; and tho' he pretends not to politics, he may have a turn for some more useful science. When these are considered, if his modesty is great, you cannot oblige him more than by throwing an opportunity in his way to display his capacity on the subject he believes himself most able to handle with advantage; for, in order to support a thorough good humour, a man must be pleased with himself as well as with others. When this is properly taken care of, conversation seldom fails to prove entertaining; and to the neglect of this are owing many of the yawning hours spent in companies composed of men not incapable of behaving agreeably.

The manner of telling a story is also worth your notice; you have known the pleasure of hearing a long one well told; Mr French has an admirable talent in this way; but then you must observe that half the pleasure he gives, arises from his happily avoiding any of the silly digressions, which are the great cause of a story's seeming tedious; you never hear him mingle his relation with, I remember very well it was the same day that squire Worthy's son came of age.—I bought my bay nag the very day before, at such a fair, being a Friday, that year;—or, I can scarce think of it without laughing;—or, but, however, as I was saying;—and a hundred more such dead weights to attention. Nor does he ever praise a story before he relates it; a fatal rock to many a good relation, for when a story wants a preparatory recommendation, it ought not to be told, and even when the relation is possible, the generality of auditors are apt to persuade themselves,

The mountain labours, and a mouse is born.

These are loose and general hints, yet by a due improvement of them you will find yourself very sensibly grow more and more agreeable wherever you converse. An easy and becoming freedom you already have, and by the addition of discretion in your use of them, and

complaisance to others, you will probably succeed in the desire so predominant in you, of being admired by men of sense and judgment. Which will be no small pleasure to, yours, &c.

LETTER IV.

A young man in business, to a father, desiring leave to address his daughter.

SIR,

London, September 24.

I Hope the justness of my intentions will excuse the freedom of these few lines, whereby I am to acquaint you of the great affection and esteem I have for your daughter. I would not, Sir, offer at any indirect address, that should have the least appearance of inconsistency with her duty to you and my honourable views to her; chusing, by your influence, if I may approve myself to you worthy of that honour, to commend myself to her approbation. You are not insensible, Sir, by the credit I have hitherto preserved in the world, of my ability, by God's blessing, to make her happy; and this the rather emboldens me to request the favour of an evening's conversation with you at your first convenience, when I will more fully explain myself, as I earnestly hope, to your satisfaction, and take my encouragement or discouragement from your own mouth. I am, Sir, mean time, with great respect,

Your most obedient and humble servant.

LETTER V.

From a young lady to her father, acquainting him with a proposal of marriage made her.

Honoured Sir,

Canterbury, June 2.

I Think it may duty to acquaint you, that a gentleman of this town, by name Mr Truelove, and by business a linen draper, has made some overtures to my cousin Teltruth, in the way of courtship to me. My cousin has brought him once or twice into my company,

which he could not well decline doing, because he has dealings with him, and has an high opinion of him and his circumstances. He has been set up for four years, and has very good business, and lives in credit and fashion. He is about twenty nine years old, and a likely man enough; he seems not to want sense or manners, and is come of a good family. He has broke his mind to me, and boasts how well he can maintain me; but I assure you, Sir, I have given him no encouragement, and told him that I had no thoughts of changing my condition; yet a while, and should never think of it but in obedience to my parents; and I desired him to talk no more on that subject to me. Yet he resolves to persevere, and pretends extraordinary affection and esteem. I would not, Sir, by any means, omit to acquaint you with the beginning of an affair that would be want of duty in me to conceal from you, and shew a guilt and disobedience unworthy of the kind indulgence and affection you have always shewn to,

S I R,

Your most dutiful daughter.

My humble duty to my honoured mother, love to my brothers and sisters; and respects to all friends. Cousin Teltruth, and his wife and sister, desire their kind respects. I cannot speak enough of their civility to me.

B E T T E R VI.

The young gentleman's letter to the father, apprising him of his affection to his daughter.

S I R,

Canterbury, June 12.

I Take the liberty, though personally unknown to you, to declare the great value and affection I have for your worthy daughter, whom I had the honour to see at my good friend Mr Teltruth's. I should think myself intirely unworthy of her favour, and of your approbation, if I could have a thought of influencing her resolution but in obedience to your pleasure; as I should

on such a supposition, offer an injury likewise to that prudence in herself, which I flatter myself, is not the least of her amiable perfections. If I might have the honour of your countenance, Sir, on this occasion, I would open myself and circumstances to you; in that frank and honest manner which should convince you of the sincerity of my affection for your daughter; and at the same time of the honourableness of my intentions. In the mean while I will in general say, that I have been set up in my business, in the linen drapery way, upwards of four years; that I have a very good trade for the time; that I had 2000*l.* to begin with, which I have improved to 2500*l.* as I am ready to make appear to your satisfaction; that I am descended of a creditable family, have done nothing to stain my character, and that my trade is still farther improvable, as I shall, I hope, enlarge my bottom. This, Sir, I thought but honest and fair to acquaint you with, that you might know something of a person who sues to you for your countenance and that of your good lady, in an affair, that I hope may prove one day the greatest happiness of my life; as it must be if I can be blessed with that, and your dearest daughter's approbation. In hope of which, and the favour of a line, I take the liberty to subscribe myself,

Good Sir,

Your most obedient humble servant.

LETTER VII.

From a country chapman beginning trade, to a city dealer, offering his correspondence.

S I R,

Leeds, Oct. 20.

THE time of my apprenticeship with Mr Trusty of this town, being expired, I am just going to begin for myself in Wakefield, having taken a shop there for that purpose. And as I know the satisfaction you always gave to my master in your dealings, I make an offer to you of my correspondence, in expectation that you will use me as well as you have done him, in whatever I may write to you for. And this I the rather ex-

pect, as you cannot disoblige Mr Trusty by it, because of the distance I shall be from him; and I shall endeavour to give you equal content with regard to my payments, &c. Your speedy answer whether or not you are disposed to accept of the offer, will oblige,

Your humble servant.

LETTER VIII.

From a father to a son, to dissuade him from the vice of drinking to excess.

My dear son,

October 3.

IT is with a grief proportioned to my love; which is extreme, that I understand you have of late neglected your studies, and given yourself up to the odious vice of drinking: what shall I say, what shall I do, to engage you to quit this pernicious practice, before it becomes such a habit, that it will be impossible, or at least very difficult for you to cast it off? Let me require, let me intreat you, to give a suitable attention to what I have to say on this head, which I shall offer rather as a warm friend, than an angry father; and as I address myself to your reason, I will leave it to yourself to judge of the truth of the observation I have to make you.

In the first place, with respect to health, the greatest jewel of this life, it is the most destructive of all vices: vertigoes, asthma's, palsies, gouts, apoplexies, cholics, fevers, consumptions, dropsies, stone, and hypocondriac diseases, are naturally introduced by excessive drinking.

All the rest of the vices together, are not so often punished with sudden death as this one: what fatal accidents, what quarrels, what breaches between friend and friend, are owing to it!

Then, in the second place, How does it deface reason, destroy all the tender impulses of nature, make a wise man a fool, and subject persons of the brightest parts to the contempt of the weakest, and even, in time, extinguish those shining qualities which constitute the difference between a man of sense and a blockhead! For, as a certain eminent author very well observes,

fools have generally stronger nerves, and less volatile spirits, than men of fine understanding; that which will rouse the one, will make the other either stupid or frantic, and though it sometimes, while the fit continues, strengthens the imagination, yet it always depresses the judgment; and after the fit is over, both those faculties languish together, till, in time, it quenches the imagination, impairs the memory, and drowns the judgment.

Most other vices are compatible, as the same author observes, with several virtues; but drunkenness runs counter to all the duties of life. A great drinker can hardly be either a good husband, a good father, a good son, a brother, or a good friend: it lays him open to the worst company, and his company frequently subjects him to lewd women, gaming, quarrels, riots, and often murders. All other vices, even, the greatest of vices, as ambition, unchastity, bigotry, avarice, hypocrisy, detest this unnatural and worse than beastly vice; for the beasts themselves, even the uncleanest of them, know nothing of it.

Other vices indeed make men worse, says this judicious author; but this alters men from themselves, to that degree, that they differ not more from their present companions, than from their former selves. A habitude of it will make the prudent inconsiderate, the ambitious indolent, the active idle, and the industrious slothful; so that their affairs are ruined for want of application, or by being intrusted in the hands of those who turn them wholly to their advantage, and, in the end, to the ruin of those who employ them.

I have written a long letter already: yet have I still more to say; which, that I may not tire you, I will leave to another opportunity,

Your most indulgent father.

LETTER IX.

From an apprentice to his master, begging forgiveness for
a very great misdemeanor.

Good Sir,

I Am so ashamed of myself for the last occasion I have given you to be angry with me, after my repeated promises of amendment, that I have not the courage to speak to you. I therefore take this method of begging you to forgive what is past; and let this letter testify against me, if ever I wilfully or knowingly offend again for the future. You have children of your own. They may possibly offend; tho' I hope they never will as I have done. Yet, Sir, would you not wish they might meet with pardon, if they should, rather than reprobation?—My making or my ruin, I am sensible, lies in your breast. If you will not forgive me, sad will be the consequence to me, I doubt. If you do, you may save a soul, as well as a body, from misery; and I hope, Sir, you will weigh this with your usual goodness and consideration. What is past I cannot help; but for what is to come, I do promise, if God gives me health and power, that my actions shall testify for me how much I am,

Good Sir,

Your repentant humble servant.

LETTER X.

The master's answer.

Robert,

YOur letter has affected me so much, that I am willing once more to pass over all you have done. Surely at last I may depend on these your solemn assurances, and, as I hope, deep contrition? If not, be it as you say, and let your letter testify against you for your ingrateful baseness; and for me, in my readiness (which however shall be the last time) to forgive one that has

been so much used to promise, and so little to perform.
But yet I hope for better, because I yet wish you well ;
being as you use me,

Yours or other wise.

LETTER XI.

From an apprentice, where the master is too remiss in
his own affairs.

Honoured Sir and Madam,

YOU desire to know how I go on in my business. I
must needs say, very well in the main, for my
master leaves every thing, in a manner to me. I wish he
did not, for his own sake. For though I hope he will
never suffer on the account of any wilful remissness or
negligence, much less want of fidelity, in me, yet his af-
fairs do not go on so well as if he was more in them,
and less in the tavern. But it becomes not me to reflect
upon my master, especially as what I may write or say
on this head, will rather expose his failings, than do
him service ; for as they must be his equals that should
reprove him, so all a servant can observe to others will
do more harm than good to him. One thing is at pre-
sent in my own power, and that is, to double my dili-
gence, that his family suffer as little as possible by his
remissness. And another, I hope, by God's grace, will
be, and that is, to avoid myself, when my time comes,
those failings which I see so blameable in him. And as
this will be benefiting properly by the example (for that
bee must be worse than a drone, that cannot draw ho-
ney from a bitter as well as a sweet flower) so it will
give you the pleasure of knowing, that your good in-
structions are not thrown away upon me, and that I am,
and ever will be,

Your dutiful son.

LETTERS.

LETTER XII.

To a country correspondent, modestly requesting a balance of accompts between them.

SIR,

I Find myself constrained, by a present exigence, to beg you to balance the accmpt between us. Tho' matters have run into some length, yet would I not have applied to you, had I known so well how to answer my pressing occasions any other way. If it suits you not to pay the whole, I beg, Sir, you would remit me as much towards it as you can, without prejudice to your own affairs; and it will extremely oblige

Your most humble servant.

LETTER XIII.

In answer to the preceding.

SIR,

I Am very glad I have it in my power to send you now, directly one hundred pounds, on accmpt between us, which I do by our carrier, who will pay you in specie. I will soon remit you the balance of your whole demand, and am only sorry that I gave occasion for this application for what is so justly your due. When I send you the rest, which will be in a few days, if I am not greatly disappointed, I will accompany it with an order, which will begin a new debt; which I hope to be more punctual in discharging, than I have been in the last. I am very sincerely,

Your faithful friend,

And humble servant.

LETTER XIV.

From a gentleman to a lady, professing an aversion to the tedious forms of courtship.

Dear Madam,

I Remember that one of the ancients, in describing a youth in love, says he has neither wisdom enough to speak, nor to hold his tongue. If this be a just description, the sincerity of my passion will admit of no dispute: and whenever, in your company, I behave like a fool, forget not that you are answerable for my incapacity. Having made bold to declare this much, I must presume to say, that a favourable reception of this will, I am certain, make me more worthy of your notice; but your disdain would be what I believe myself incapable ever to surmount. To try by idle fallacies, and airy compliments, to prevail on your judgment, is a folly for any man to attempt who knows you. No, madam, your good sense and endowments have raised you far above the necessity of practising the mean artifices which prevail upon the less deserving of your sex; you are not to be so lightly deceived; and if you were, give me leave to say, I should not think you deserving of the trouble that would attend such an attempt.

This, I must own, is no fashionable letter from one who, I am sure loves up to the greatest hero of romance; but as I would hope, that the happiness I sue for, should be lasting, it is certainly most eligible to take no step to procure it but what will bear reflexion; for I should be happy to see you mine, when we have both out-lived the taste for every thing that has not virtue and reason to support it. I am, Madam, notwithstanding this unpolish'd address,

Your most respectful admirer,

And obedient servant.

L E T T E R X V.

To a friend, who had promised to lend a sum of money to answer a critical exigence, and drove it off to the last.

Dear Sir,

YOU were so kind as to tell me, a fortnight ago, that you would lend me one hundred pounds on my bond, to answer a demand that my credit would be otherwise a sufferer by. And you were pleased to say, you would have me look no further, and that I should certainly have it in time, I have looked no further, Sir, and the day of payment approaching, you cannot imagine how my mind has suffered by being not absolutely sure of having the money to answer the demand. I hope, Sir, nothing has happen'd to make you alter your mind: for at this short notice, I shall not know to whom to apply to raise it. In the utmost perturbation of mind, for fear of the worst, my credit being wholly at stake, I beg your answer, which I hope will be to the satisfaction of, Sir,

Your obliged humble servant.

L E T T E R X V I.

The answer, excusing the pain he had given his friend by his remissness.

Dear Sir,

I Will attend you this afternoon with the money, which I had always great pleasure in the thought of supplying you with; and I am most heartily vexed with myself, for giving you the pain and uneasiness that must have attended a mind so punctual as yours, and in a case so critically circumstanced. But I hope you'll forgive me, tho' I can hardly forgive myself. I am, Sir, as well on this, as on any other occasion in my power,

Your sincere friend and servant.

LETTER XVII.

From a sailor to his betrothed mistress.

My dear Peggy,

Barbadoes, Oct. 9.

IF you think of me half so often as I do of you, it will be every hour, for you are never out of my thoughts; and, when I am asleep, I constantly dream of my dear Peggy. I wear my half bit of gold always at my heart, tied to a blue ribband round my neck; for true blue, my dearest love, is the colour of colours to me. Where, my dearest, do you put yours? I hope you are careful of it: for it would be a bad omen to lose it.

I hope you hold in the same mind still, my dearest dear; for God will never bless you, if you break the vows you have made to me. As to your ever faithful Andrew, I would sooner have my heart torn from my breast, than it should harbour a wish for any other woman besides my Peggy. O my dear love! you are the joy of my life: my thoughts are all of you; you are with me in all I do, and my hope and my wishes are only to be yours. God send it may be so.

Our captain talks of sailing soon for England; and then, and then, my dear Peggy!—O how I rejoice, how my heart beats with delight, that makes me I cannot tell how, when I think of arriving in England, and joining hands with my Peggy, as we have hearts before, I hope: I am sure I speak for one.

John Arthur, in the good ship George, Capt. Plow-sea, which is returning to England (as I hope we shall soon) promises to deliver this into your own dear hand; and he will bring you too, six bottles of citron-water, as a token of my love. It is fit for the finest ladies taste, it is so good, and is what they say ladies drink, when they can get it.

John says, he will have one sweet kiss of my dearest Peggy, for his care and pains. So let him, my best love, for I am not of a jealous temper. I have a better opinion of my dearest, than so.—But, oh, that I was in his place—One kiss should not serve my turn,

though I hope it may his. Yet if he takes two, I'll forgive him; one for me, and one 'for himself. For I love John dearly, and so you may think. Well, what shall I say more?——Or, rather, what shall I say next?——For I have an hundred things crowding in upon me, when I write to my dearest, and, alas, one has so few opportunities! But yet I must leave off; for I have written to the bottom of my paper. Love then to all friends, and duty to both our mothers, concludes me

Your lover till death.

LETTER XVIII.

HER ANSWER.

Dear Andrew,

FOR so I may call you now we are sure, and so my mother says. This is to let you know, that nothing shall prevail upon me to alter my promise made to you, when we parted, with heavy heart's enough, that's true: and yet I had a little incling given me, that Mr Plank's son the carpenter would be glad to make love to me: but do you think I would suffer it, no, indeed, for I doubt not your loyalty to me: and do you think I will not be as loyal to you?——To be sure I will. These sailors run such chances, said one that you and I both know. They may return, and they may not. Well I will trust in God for that, who has returned safe to his friends, their dear Andrew, so many a time, and often. They will have a mistress in every land they come to, said they. All are not such naughty men, said I, and I'll trust Andrew Trusty all the world over. For why cannot men be as faithful as women tro? and for me I am sure no love shall touch my heart but yours.

God send us a happy meeting! Let who will speak against sailors, they are the glory and the safe-guard of the land: and what would have become of Old England long ago but for them? I am sure the lazy, good-for nothing land-lobbers would never have protected us from our cruel foes. So sailors are, and ever shall be,

esteemed by me, and of all sailors, my dear Andrew
Trusly. Believe this from,

Your faithful, &c.

P. S. I had this letter writ in readiness to send you,
as I had an opportunity, and the captain's lady
undertakes to send it with hers. That is very
kind and condescending: It is not?

L E T T E R XIX.

Of congratulation.

S I R,

DO not admire that I am one of the last, that con-
gratulate with you, your good fortune: the joy
which I conceived was so extreme, that it could afford
me no sooner the liberty to acquit myself. I know the
most of your friends have prevented me, but being their
satisfaction is small, I do not wonder if their diligence be
the greater. As for my part, my idleness increaseth my
merit, since stay and protraction proceeded only from
the excess of the gladness of,

S I R,

Your most humble servant,

Tom Joyful.

L E T T E R XX.

A N S W E R.

S I R,

Since you take part in the good fortune, which has
befallen me, you must also participate in the advan-
tage of the new credit which it has brought me into.
This I advertise you of, to the end, that you let not any
occasion slip, wherein you may procure a proof of my
friendship, nor forget this advice which I give you, for
believe me, I am impatient to have an opportunity of
shewing you how much I am,

S I R,

Your friend and servant,

Timothy Grateful.

LETTER XXI.

Of thanks, &c.

S I R,

I Received the favour of yours with a kind of present : and know not indeed at this time any other way to shew my gratitude, than by my hearty thanks for the same. Every thing you do carries a charm with it, your manner of doing it is as agreeable as the thing done. In short, Sir, my heart is full, and would overflow in your praise, did I not stop and subscribe myself

Yor most obliged,

May 13th,
1762.

And most obedient servant,

Thomas Thankful.

LETTER XXII.

Requiring the payment of money, which serves for an acquittance.

S I R,

I Find; upon stating the accompt between you and me; that several considerable sums of money are due to me from you; wherefore having occasion for thirty pounds, I desire you to send it me by the bearer hereof (or here name the carrier) and in so doing you will very much oblige me.

As to the payment thereof, this letter and the bearer's acquittance, shall be your sufficient security and discharge for so much money. In witness whereof, I have hereunto set my hand, the sixth day of June, 1762.

John Tradewell.

LETTER XXIII.

A N S W E R.

S I R,

I Send by the bearer (or the carrier) thirty pounds according to your desire, and have taken his receipt for it; but, because you know I send but for small parcels of goods at a time, therefore I desire you always

for the future, when I send you money, that you mention in the acquittances the names of the goods for which you received the money, or at least I would have you to mention what money remains unpaid ; for thro' want of such certain knowledge, some poor country tradesmen have found great loss, either by the master or their apprentices receiving the money sent, and not mentioning for what goods. Pray take it not ill that I thus write, for I am satisfied of your honest dealing ; but know not the servants you intrust to receive the money, I send in small parcels. I rest

Your friend and chapman,

James Punctual.

LETTER XXIV.

From a servant in his master's absence to one of his country customers.

Mr Thomas Merchant,

S I R,

I Received yours, and for answer say, I am very sorry to hear that the goods have not answered your expectation ; however, have placed them to the credit of your accompt, and returned others in their stead by Robert Derham the carrier. I know my master would willingly oblige you in any thing in his power, and as his faithful servant I have herein done my utmost to give you satisfaction, who am

To Mr Tho. Merchant,
clothier in Halifax.

Your most humble servant,

James Windsor.

LETTER XXV.

From a youth at school in Durham to his parents in London.

Durham, January 12. 1761.

Honoured father and mother,

I Received your kind letter of the 14th of November past, and also the several things therein mentioned, by the Newcastle waggon, for which I return you my most humble and hearty thanks, they coming very seasonably for the relief of my occasions.—I begin to make pretty good improvement in my learning now (tho' at first, it seemed a little irksome and hard) and I hope to gain the point at last for which you sent me hither. Pray accept of my most humble duty to yourselves, and give my kind love to my brothers and sisters, and to my old play fellows and neighbours; this being all at present from,

Honoured parents, your dutiful son,

Peter Wise.

LETTER XXVI.

From an apprentice to his friends.

Honoured father and mother,

BY these I let you know, that by your care and conduct I am well settled, and pleased with my station, and could not but in duty return you my hearty thanks in a grateful acknowledgment of your love and tender care of me: I will endeavour to go through my business chearfully; and having begun well, I hope I shall persevere to do so to the end, that I may be a comfort to you hereafter, and in some measure make a return of your love and kindness to me, who am

Your dutiful, obedient son,

and most humble servant,

Jeremiah Careful.

LETTER XXVII.

Of recommendation.

S I R,

THE bearer hercof, James Roberts, I fend you, as one whose honesty you may rely on, and my experience of his conduct and fidelity give me a certain kind of confidence in recommending him to you; but you know me, Sir, and I believe you cannot in the least think that I would recommend any one to you, if I had the least umbrage of suspicion or doubt concerning their probity. I am Sir,

Your real friend and humble servant,

James Goodman.

LETTER XXVIII.

To a country chapman.

Mr James Tradewell,

S I R,

YOU and I have formerly had trading together, and it is not my fault that we do not continue so to do; for assure yourself, I have a great value and respect for you, and on that account none shall be more ready to oblige you in what I may; and pray let us once more re-assume our dealing together, and you shall find, that for any goods you have occasion for in my way none shall use you more kindly than,

S I R,

Your real friend and humble servant,

George Punctual.

LETTER XXIX.

By way of petition.

Honoured Sir,

I am uncertain whether my late misfortunes have come to your knowledge; however I most humbly pre-

sume on your good nature, being assured by sundry examples of your compassion, that you will think of, and take pity on the distressed: therefore as an object truly deserving compassion, I most humbly implore and petition you to consider the many losses and disappointments that I have met with in my wayward and unlucky fortune, which have reduced me to such necessitous circumstances, that I cannot possibly proceed in my affairs: you was pleased once to stile me your friend, and so I was indeed; and so I would certainly do now, and shew it by a signal proof of kindness, if our circumstances were changed, by standing between you and misfortune, and screening you from the malevolent and inauspicious influences of cross-grained stars. I doubt not, Sir, but your generosity and goodness is as great; and I hope with all humility, you will be pleased to interpose your good offices, &c. between unlucky fortune, and,

S I R,

Your very humble servant,

George Shipwreck.

L E T T E R XXX.

To a friend to desire him to endeavour to end a difference between two of their friends.

Loving cousin,

AFTER my love to you, this is to let you know, that two of your friends D. N. and J. F. are going to law upon a trifling occasion. I pray come over and see to reconcile them, or send your advice how I may labour to do it, and I shall be very much obliged to you. I remain

Your affectionate kinsman and humble servant,

G. T.

LETTER XXXI.

The answer, with advice.

Dear friend,

WITH my unfeigned love to you, I received your letter, and it grieves me to hear that our friends should be for going to law, and not compelled to it; for then much money is spent upon lawyers, to end their differences by jury-men, when two friends may do it better.

But if one of the parties is for going to law, and the other not, then he that is against going to law is the most christian, and is not to be blamed, tho' he use the law of the nation to defend himself, neither indeed, can he avoid it, if his adversary seeks revenge, and so forces him to spend his money in his defence.

But you desiring my advice about reconciling those two friends, they having not yet see'd lawers, persuade the man that is for going to law, that two friends chosen by both parties may end their differences, or one person only.

And when they have nominated two to end it, then persuade the two parties to put into the hands of those arbitrators. 5 *l.* or more a-piece, according to the value of the trespass. This agreed on, next,

Let the parties sign and seal general releases to each other; then the arbitrators must dispose of the money as they see good, to the party, that has received the wrong, &c.

Thus differences among friends may be composed at a much cheaper and better rate than by trial at the assizes.

But yet 'tis best, when contending parties agree by themselves, as Christ commands, Mat. xiii. 15. and forgive trespasses, Mat. iv. 12.

Besides this, having general releases, it cuts off all former differences, and saves from divers expences, and from bonds of arbitration and awards, which, tho' they cost money often prove of no effect.

Would to God the advice above, of reconciling men

at difference, would take effect in general, then would peace flourish, &c.

I remain your friend,

Jerem. Peaceable.

L E T T E R XXXII.

From a gentleman to a gentlewoman, to beg pardon for an offence.

Madam,

TIS in vain to contend with my judge, and therefore, tho' I know my fault has been aggravated beyond what it could justly bear, yet I will rather submit myself to your sentence than go about to extenuate my crime: I am guilty enough that I have offended you, tho' I never designed it; and when you have done yourself justice, by inflicting upon me what you think I merit for my offence, than I will plead my innocency, and let you know I always was so far from saying any thing that might reflect upon your fame, that in my opinion, not innocence itself is more unspotted, or can unsullied snow appear more white: 'tis true, I am guilty to give you ground to think I have offended; but my offence is my misfortune rather than my fault. But, Madam, what if I appeal from your severer justice to your mercy? I know you are not inexorable, nor did you suck the breasts of wolves and tygers: and since there's so much sweetness in your eyes, there needs must be some pity in your heart, at least so far as to forgive a poor repenting criminal. And since you are such a bright idea of the author of all goodness, you cannot, but, like him, delight in shewing mercy. I shall henceforth endeavour to be like Cæsar's wife, not only free from guilt, but from suspicion: and further, shall, to expiate my offence, remain

Your truly sorrowful,

And much afflicted humble servant,

Roger Begpardon.

LETTER XXXIII.

ANSWER.

SIR,

I Received your letter, and must let you know, that whatsoever reflects upon my fame (which is far dearer to me than my life) tho' at the most remote distance, is what I cannot but think a fault, and therefore know not how you can be innocent: and, indeed, to plead your innocence, is to accuse me of injustice, in charging you with a crime; but from what you write, I am inclined to believe, that in what you said, you designed no injury to me: and that it was a crime of inadvertence rather than of malice. And for that reason upon your profession of repentance, I freely pardon you; but charity itself does not injoin me to hug the man I pardon in my bosom: you must not expect therefore to be admitted to the former freedoms you enjoy'd since you have made so ill an use of 'em, till you have given some more substantial proofs of the sincerity of your repentance. And tho' I pardon this your first offence, yet if you should relapse into your former follies, you must expect a much severer treatment: for then I shall no more esteem myself, as I now do,

Your reconciled friend to serve you,

Sarah Forgivewell.

LETTER XXXIV.

From a gentleman to his mistress, who seeing no hopes of success, respectfully withdraws his suit.

Madam,

I Make no doubt but this will be the welcomest letter that you ever received from me; for it comes to assure you, that it is the last trouble you will ever have from me. Nor should I have so long withheld from you this satisfaction had not the hope your brother gave me, that in time I might meet with a happier fate, made me willing to try every way to obtain your fa-

your. But I see all the hopes given me by his kind consideration for me, and those that my own presumption have made me entertain, are in vain; and I will therefore rid you of so troublesome an importuner, having nothing to offer now but my ardent wishes for your happiness, and these, Madam, I will pursue you with to my life's latest date.

May you, whenever you shall change your condition, meet with a heart as passionately, and as sincerely devoted to you as mine! and may you be happy for many, very many years, in the man you can honour with your love: for, give me leave to say, Madam, that in this my end will be in part answered, because it was most sincerely your happiness I had in view, as well as my own, when I presumptuously hoped, by contributing to the one, to secure the other. I am, Madam, with the highest veneration,

Your most obedient humble servant.

LETTER XXXV.

From a father to a daughter in service, on hearing of her master's attempting her virtue.

My dear daughter,

I Understand, with great grief of heart, that your master has made some attempts on your virtue; and yet that you stay with him. God grant that you have not already yielded to his base desires! For when once a person has so far forgotten what belongs to himself, or his character, as to make such an attempt, the very continuance with him, and in his power, and under the same roof, is an encouragement for him to prosecute his designs. And if he carries it better, and more civil at present, it is only the more certainly to undo you when he attacks you next. Consider, my dear child, your reputation is all you have to trust to. And if you have not already, which God forbid! yielded to him, leave it not to the hazard of another temptation, but come a-

way directly (as you ought to have done on your own motion) at the command of

Your grieved and indulgent father.

LETTER XXXVI.

The daughter's answer.

Honoured Sir,

I Received your letter yesterday, and am sorry I staid a moment in my master's house after his vile attempt. But he was so full of his promises of never offering the like again, that I hoped I might believe him; nor have I yet seen any thing to the contrary: but am so much convinced, that I ought to have done as you say, that I have this day left the house, and hope to be with you soon after you will have received this letter. I am,

Your dutiful daughter.





PRECEDENTS in Law and Business, that all young men ought to know and be acquainted with.

Supercriptions for Letters.

TO the king, or, To the king's most excellent majesty.

To the queen, or, To the queen's most excellent majesty.

To the prince, or, To his royal highness. To the princess, or, To her royal highness.

And in case to the lords spiritual, viz. To his grace the lord archbishop of Canterbury; To the right reverend father in God, &c. The same to the archbishop of York. If to the other bishops, To the right reverend father in God, Archibald lord bishop of, &c. And to the inferior clergy, To the reverend doctor, &c. To the reverend Mr. &c.

To write to temporal lords, viz.

To his grace the duke of _____

To the right honourable the marquis of _____

To the right honourable the earl of _____

To the right honourable the lord viscount _____

To the right honourable the lord _____

All the sons of the nobility, tho' not the immediate heirs, are to be dignified with the title of honourable, as their due by birth-right. And to a knight and baronet by virtue of his patent, the title of honourable and right worshipful is given. As likewise the former to a knight, and worshipful to an esquire.

Every privy counsellor, though not a nobleman is stiled right honourable: all ambassadors have the stile of excellency, as likewise hath the lord lieutenant of Ireland, and the captain general of his majesty's forces when in being; nor has the mayor of London, during his mayoralty, a less title than right honourable; and the she-

riffs, during their office are stiled right worshipful; nor does any thing less than the title of esquire extend to the mayors of any corporation during their office.

Directions for the beginning of Letters.

TO the king, Sir, or, May it please your majesty.
To the queen, Madam, or May it please your majesty.

To the prince, Sir, or, May it please your royal highness.

To a duke, My lord, or, May it please your grace.

To a duchess, Madam, or, May it please your grace.

To a marquis, My lord, or, May it please your lordship.

To a marchioness, Madam, or, May it please your ladyship.

To an earl, viscount, or baron, Right honourable, or, May it please your lordship. In viscount or viscountess, sound not the / in the first syllable.

To a countess, viscountess, or baroness, Madam, or Right honourable, or, May it please your ladyship.

To a knight, Sir, or, Right worshipful; and to his lady, Madam, or, May it please your ladyship.

To a mayor, justice of peace, esquire, &c. Sir, or, May it please your worship.

At subscribing your name end with the same title you began with. As, My lord, Your lordships, &c.



Of Wills and Testaments.

A Will, according to the common acceptation, is the declaration of a person's mind or intent, in relation to what he would have done after his death. The common law calls that a will, whereby lands and tenements are devised; but when it concerns only chattels, viz. moveables or what is not inheritable, it is called a testament; where lands are given by will it is termed a

devise; and where goods and chattles, commonly termed a personal estate, are bequeath, it is called a legacy.

Devifes of land, &c. must be in writing, signed by the devisor or person giving generally called the testator, or some person by his exprets direction, in the presence of three credible witnesses. If a personal estate of above the value of thirty pounds be bequeathed by word of mouth, which the law calls a nuncupative will, it must be likewise done in the presence of three witnesses.

FORM of a WILL.

IN the name of God, Amen. I, A. B. of, &c. being thro' the abundant mercy and goodness of God, tho' weak in body, yet of a sound and perfect understanding and memory, do constitute this my last will and testament, and desire it to be received by all as such: *imprimis*, I most humbly bequeath my soul to God, my Maker, beseeching his most gracious acceptance of it; thro' the all-sufficient merits and mediation of my most compassionate Redeemer, Jesus Christ, who gave himself to be an attonement for my sins, and is able to save, to the uttermost, all that come unto God by him, seeing he ever liveth to make intercession for them, and who, I trust, will not reject me, a returning penitent sinner, when I come to him for mercy; in this hope and confidence, I render up my soul with comfort, humbly beseeching the most blessed and glorious Trinity, one God most holy, most merciful and gracious, to prepare me for the time of my dissolution, and then to take me to himself into that peace and rest, and incomparable felicity, which he has prepared for those that love and fear his holy name, Amen, blessed be God. *Imprimis*, I give my body to the earth, from whence it was taken, in full assurance of its resurrection from thence at the last day: as for my burial I desire it may be decent, without pomp, or state, at the discretion of my dear wife, and my executors hereafter named, who, I doubt not, will manage it with all requisite prudence. As to my worldly estate, I will and positively order, That all my debts be paid. *Item*, I give to my dear and loving wife, for term of life, this house wherein I now dwell, with all the furniture,

and the lands and tenements that ly about it; and after her death, to my only son G. and his heirs and assigns for ever; to whom I leave also, from the time of my death, my other two estates situate in the parish of T. he paying to each of his sisters, D. and F. 5000 /. And if he die before them, and without issue, then his land (all but the vaule of 5000/. which I freely empower him to dispose of as he shall think fit) shall descend, and be long equally to those my two daughters. My poor debtors, who owe me some small matters, which, because they are in low condition, and not well able to pay them, I freely remit them all, forgiving such my debtors, as I desire God should forgive my debts for Chrill's sake. I give 60 /. to be distributed according to the discretion of my executors, among such of my neighbours of this parish as they shall apprehend most to want such assistance, but who do not at present receive alms, nor have any allowance from the parish. I give 30/. towards the good work for teaching poor children to read, and to say their catechism, in charity schools. The small remainder of my estate I give to my very good friends and dear and kind relations, G. R. and L. O. to be divided equally between them: and do constitute them executors of this my last will and testament, and trustees for my wife and children. In witness whereof, I have hereunto set my hand and seal, the 3d day of June, in the year of our Lord, 1762.

Witness, T. B.
R. T.
R. B.

A. B. (L. S.) here I take
off my seal, and do declare
this to be my last will and
testament.

Another WILL

IN the name of God, Amen. I, A. M. of, &c. being in perfect health (praised be God) do make this my last will and testament as followth. *Imprimis*, I give to my daughter L. M. 200 pounds of, &c. *Item*, I give to my daughter C. M. 500 pounds of like lawful money, and the box in the room where I ly, marked (P. Q.) and all the linen therein, with some other goods, and the rest and residue of my goods and chattles, and personal estate, after payment of my debts, legacies, and

funeral expences; and unto my son S. M. whom I make sole executor of this my last will and testament, I give, demise, and bequeath to him and his heirs, all, and every my messuages, lands, tenements, and hereditaments whatsoever and wheresoever, which I also charge with the payment of my said legacies. In witness whereof I have hereunto set my hand and seal, the 23d day of June, and in the year of our Lord, 1762.

Sealed, published, and declared by the above named A. M. for and as his last will and testament, in the presence of us,
A. B. C. D. E. F.

Observations concerning wills and testaments.

THE party who signs and seals a will, is to do it in the presence of three witnesses; who are to set their hands to it (not under three) and it is not much matter whether the witnesses hear the will read or no, so as they hear the party say he acknowledgeth that writing to be his will to which he set his hand and seal; for if they did hear it read, it cannot be supposed that they can remember the contents thereof. A man above fourteen years of age may make a will of his goods, and a woman above twelve, but neither can will their lands until twenty-one years.

If a man dies without a will, and leaves both free-lands and goods, his wife will have the third part of the profits of the land, during her life, and the third part of the goods for ever; and the next of kin to the husband the other two third parts. But he that makes a will, and leaves his wife a certain sum to be paid her yearly, during her life, by his executor, should also give her some of his moveable goods.

If a man dies without a will signed and sealed, leaving many children, the eldest son claims all the land; but, if he leaves daughters only, they will be co-heirs to all free land.

Copy hold land is not given by will, but passed by surrender in court.

To will land to E. F. for ever ; or to G. H. and his assigns, this is but for life ; but I give and demise unto E. F. his heirs and assigns for ever, so G. H. may sell it.

The word executor, is the name given to him that is to see the will performed ; but if it be a woman, she is called in the will executrix.

*Set your house in order while you are in health,
For a (will) testament is of force after men are dead,
Heb ix. 17. but not before.*

For if a man hath sealed his will and delivered it to a friend to keep, he may make another, which makes the former will void.

The FORM of a LETTER of ATTORNEY, to execute a particular business.

K NOW all men by these presents, that I, A B. of G. in the country of D, yeoman, for divers good causes and considerations, me hereunto moving, have made, ordained, constituted, and appointed, and by these presents, do make, ordain, constitute, and appoint my trusty friend I K, of M, gent. my true and lawful attorney, for me, in my name, and to my use, to ask, demand, recover and receive of, and from B C, of, &c. the sum of, &c. giving, and by these presents, granting to my said attorney, my sole and full power, and authority, to take, pursue, and follow such legal courses for the recovery, receiving, and obtaining of the same, as I myself might or could do, were I personally present ; and upon the receipt of the same, acquittances or other sufficient discharges for me, and in my name, to make, sign, seal and deliver ; as also one or more attorney or attorneys under him to substitute and appoint, and again at his pleasure to revoke ; and farther to do, perform and finish for me, and in my name, all and singular thing or things, which shall or may be necessary, touching and concerning the premises, as fully, thoroughly and entirely, as I the said A B, in my own person might, or could do, in or about the same : ratifying, allowing, and confirming whatsoever my said attorney shall lawfully do, or cause to be done, in and about the execution of the premises

by virtue of these presents. In witness whereof, I have hereunto set my hand and seal, the 12th day of September, in the 2d year of the reign of our sovereign lord George III. by the grace of God, king of Great Britain, &c. and in the year of our Lord 1762.

Revocation of a Letter of Attorney.

K NOW all men by these presents, that whereas I — of — in the county of —, yeoman, upon the trust and confidence which I had in — of —, gent. by letter of attorney under my hand and seal, bearing date —, did make, ordain, constitute and appoint the said — my lawful attorney, for me, and in my name, and to my use, to ask, demand, recover and receive, of and from — of —, bookseller, the sum of —, as thereby more at large may appear: now know ye, that I the said —, for divers good causes and considerations me hereto moving, have, and by these presents do revoke, disannul and make void the said letter of attorney, and all power and authority, therein to him the said — given. In witness, &c.

Indenture for an Apprentice.

T HIS indenture witnesseth that — son of —, &c. doth put himself apprentice to —, shoemaker, to learn his art or mystery, and with him after the manner of an apprentice to serve, from the day of the date hereof for and during the term of seven years next ensuing; during all which term, the said apprentice, his said master faithfully shall serve, his secrets keep, and all his lawful commands every where gladly do; he shall do no damage to his master, nor see it to be done by others, without letting or giving notice thereof to his said master: he shall not waste his master's goods, nor lend them unlawfully to any. He shall not commit fornication, nor contract matrimony during the said term; he shall not play at cards, dice or any other unlawful game, whereby his master may be damaged with his own goods, nor the goods of others; he shall not ab-

sent himself day or night from his said master's service unlawfully: nor haunt ale houses, taverns, or play-houses; but in all things behave himself as a faithful apprentice, in the trade or mystery he now followeth; and the said master shall procure and provide for him sufficient meat, drink, apparel, lodging, washing and all other necessaries during the said term. And for the true performance of all and every the said covenants and agreements, either of the said parties bindeth himself unto the other firmly by these presents. In witness whereof, they have interchangeably set their hands and seals hereunto, this twentieth day of September, in the second year of the reign of our sovereign lord George III. king of Great Britain, France and Ireland, &c. and in the year of our Lord, 1762.

Letter of Attorney from a Seaman.

K N O W all men by these presents, That I. ———, mariner, now belonging to his majesty's ship the Ann, for divers good causes and considerations me hereunto moving, have, and by these presents do make, ordain, constitute and appoint my trusty friend ———, citizen and baker of Bristol, my true and lawful attorney for me, and in my name, and for my use, to ask, demand, and receive of and from the right honourable the treasurer, or pay master of his majesty's navy, and commissioners for prize-money, and whom else it may concern, as well all such wages, and pay, bounty-money, prize-money, and all other sum and sums of money whatsoever, as now are, and which hereafter shall or may be due or payable unto me: also all such pensions, salaries; smart money, and all other monies and things whatsoever, which now, or at any time hereafter is, or shall be due to me for my service, or otherways in any of his majesty's ship or ships, frigates or vessels: giving and hereby granting unto my said attorney full and whole power to take, pursue, and follow such legal ways and courses for the recovery, obtaining and discharging the said sum and sums of money, or any of them, as I myself might, or could do, were I personally present. And I do hereby ratify, allow, and confirm all and whatfoe-

ver my said attorney shall lawfully do, or cause to be done, in and about the execution of the premises, by virtue of these presents. In witness, &c.

A B O N D.

K N O W all men by these presents, That I (Robert Scott, of the county of Durham, merchant) am held, and firmly bound unto (James Syms of Doncaster, in the county of York, Esq;) in the sum of (Two hundred) pounds of good and lawful money of Great Britain, to be paid to the said (James Syms) his heirs, executors, administrators, or assigns: to which payment, well and truly to be made, I bind myself, my heirs, executors, administrators, or assigns, firmly by these presents. Sealed with my seal. Dated the (first day of June) in the 2d year of the reign of our sovereign lord (George the third) by the grace of God, king of Great Britain, France and Ireland, defender of the faith, and in the year of our Lord God (One thousand seven hundred and sixty two.)

The C O N D I T I O N.

T H E condition of this obligation is such, that if the above bounden (Robert Scott) his heirs, executors or administrators, do well and truly pay, or cause to be paid, unto the above mentioned (James Syms) his executors, administrators, or assigns, the full sum of (one hundred pounds) with lawful interest for the same, of good and lawful money of Great Britain, on the (first day of January next) ensuing the date hereof; then this obligation to be void, or else to remain in full force.

Sealed and delivered (being

first legally stamped) in

presence of

Robert Scott.

F. G.

H. I.

☞ When a bond is given in consideration of the value received, the bond is always to be made for double the value in the condition.

What is to be varied, and made agreeable to the circumstances before you, is in those words inserted between ().

A Condition to stand to the Award of Arbitrators.

THE condition of this obligation is such, that if the above-bounded (James Sly of Newcastle, merchant) his heirs, executors and administrators, and every of them, do and shall in all things, well and truly stand to, obey, abide by, perform, fulfil, and keep the award, order, arbitrament, final end and determination of (Andrew Mills and James Mills, of Bristol, merchants) arbitrators indifferently named, elected, and chosen, as well on the part and behalf of the above bounded (James Sly) as of the above named (James Syms) to arbitrate, award, order, judge, and determine of and concerning all manner of actions, causes, and causes of actions, suits, bills, bonds, specialities, judgments, executions, extents, accompts, debts, dues, sum and sums of money, controversies, trespasses, damages and demands, whatsoever, at any time or times heretofore had, made, moved, brought, committed, sued, prosecuted, done, suffered, committed, or depending by or between the said parties, so as the award be made, and given up in writing, under their hands and seals ready to be delivered to the said parties on or before the () next ensuing the date above mentioned :) but if the said arbitrators do not make such an award, of and concerning the premises, by the time aforesaid; that then if the said (James Sly) his heirs, executors, and administrators, for his and their parts and behalf, do in all things well and truly stand to, obey, abide, perform, fulfil, and keep the award, order, arbitrament, umpirage, final end and determination of (John Jack, of Lincoln, Esq;) umpire indifferently chosen between the two parties, to end the said matter and differences, so as the said umpire do make his award and umpirage of, and concerning the premises, and deliver the same in writing under his hand and seal, to the said parties, on or before the () day of () next ensuing the date above said, then this obligation to be void, or else to remain in full force.

Sealed and delivered (being legally stamped) in presence of, &c.

James Sly, (L. S.)

Note, Both the parties are in this case to be mutually bound, *mutatis, mutandis*; and if there be no umpire admitted of, the latter part of the condition, beginning [But if the said arbitrators] is to be omitted.

The Form of an Umpirage of Award.

TO all people, to whom this present writing shall come; I (John Jack of Lincoln, Esq;) umpire, indifferently chosen between (James Slight, and John Fox of London, merchants) send greeting; Now know ye, that I the said (John Jack) having deliberately heard, considered, and understood the griefs, allegations, and proofs of both the said parties, and being willing, as much as in me lieth, to set the said parties at unity and good accord, do by these presents, arbitrate, award, order, deem, decree and judge, that the said (James Slight) his executors, administrators, or assigns, do, and shall well and truly pay, or cause to be paid unto the said (John Fox) his executors, administrators, or assigns, the sum of () of lawful money of Great Britain, on the () day of () next ensuing the date of these presents; and that upon payment thereof, the said (James Slight and John Fox,) shall, at their own proper costs and charges, seal, subscribe, and as their several acts and deeds, deliver each to the other, a general release in writing, of all matters, actions, suits, causes, of actions, bonds, bills, covenants, controversies, and demands whatsoever from the beginning of the world to the (sixteenth day of July last past) and in the (2) year of our sovereign lord (George III.) king of Great Britain, &c. In witness whereof I have hereunto set my hand and seal, the (25th day of June 1762).

Sealed and delivered (be-

ing duly stamped) in
presence of, &c.

John Jack. [L. S.]

A Letter of Licence to a Debtor.

TO all people, to whom this present writing shall come; we whose names are here under subscribed, and seals affixed, creditors of [D. F. of Bristol, mer-

chant] send greeting. Whereas the said [D. F.] on the day of the date of these presents, is indebted unto us severally, in divers considerable sums of money, which at present he is not able to satisfy unto us, without respite, and time to be given unto him for the payment thereof; Know ye therefore, That we the said creditors, for divers good causes and considerations, us thereunto moving, have given and granted, and by these presents, do give and grant unto the said [D. F.] our sure and safe conduct and free licence, that the said [D. F.] shall, and may safely come and go, and resort unto us, and every one of us his said creditors, to compound and take order with us, and every one of us for all and every of our said debts, and to go about any other business to any other person or persons whatsoever, without any trouble, suit, arrest, attachment, or other molestation to be offered or done to him, the said [D. F.] his wares, goods, monies, or other merchandizes whatsoever, by us, or any of us, or by the heirs, executors, administrators, partners, or assigns of us, or any of us, or by our, or any of our means or procurement, to be sought or procured to be done, from the day of the date hereof, unto the full end and term of [one whole year] next ensuing. And we the said creditors, whose names are here underwritten, do hereby covenant and grant, and every one of us for his own part, his executors and administrators covenanteth and granteth, to and with the said [D. F.] that if any trouble, wrong, damage, or injury shall be done unto him the said [D. F.] either in his body, goods, or chattles, or any of them, within the said term of [one year] next coming after the date hereof, by us, or any of us, his said creditors, or by any other person or persons, by or through the procurement, consent, or knowledge of us, or any of us, contrary to the true intent and meaning of this our present writing of safe conduct, that then the said [D. F.] by virtue of these presents, shall be discharged and acquitted for ever, towards and against him and them, of us, his and our heirs, executors, administrators, partners, or assigns, and every one of them, by whom, and by whose means, he shall be arrested, troubled and attached, or damnified, of all manner of actions, suits, quarrels, debts, and de-

mands, either in law or equity, from the beginning of the world, to the day of the date hereof; in witness whereof, we have herunto set our hands and seals the [fourth day of July] Anno Domini 1762.

Sealed and delivered (being first duly stamped) in presence of, &c.

A. C. [L. S.]

C. D. [L. S.]

E. F. [L. S.]

A BILL of SALE.

K NOW all persons whom it may concern, That I [John Trader of Kendal, in the county of Westmoreland, weaver] for and in consideration of the sum of [one hundred pounds] of lawful money of Great Britain, to me in hand paid, by [Daniel Dike, of London, Esq;] the receipt whereof I do hereby acknowledge, have bargained, sold, and delivered, and by these presents, according to the due form of law, do bargain, sell, and deliver unto the said [Daniel Dike] forty pieces of Kendal cotton, one hundred pairs mens hose, fifty womens do, fifteen boys do, sealed up with my seal. To have and to hold the said bargained premises, unto the said [Daniel Dike] his executors, administrators, and assigns for ever. And I the said [John Trader] for myself, my executors and administrators the said bargained premises unto the said [Daniel Dike] his executors, administrators and assigns, against all persons, shall and will warrant, and for ever defend, by these premises: [If the bargained premises be redeemable, by a limited time, a proviso of this nature is added.] Provided nevertheless, that if I the said [John Trader] my executors, administrators and assigns, or any of us, do and shall well and truly pay, or cause to be paid unto the said [Daniel Dike] his executors, administrators, or assigns, the sum of [one hundred and three pounds] as principal and interest, lawful money of Great Britain, on the [thirtieth of October, next ensuing the date hereof] for redemption of the bargained premises; then this present bill of sale shall be void, and of no effect: but if default be made in the payment of the said [one hundred and three pounds] in part or in the whole, contrary to the manner and form aforesaid, that then it shall remain and be in full force and

virtue: in witness whereof, I have hereunto set my hand and seal, the [twenty sixth day of June] in the year of our Lord [1762]

Sealed and delivered, &c. John. Trader. [L. S.]

A general Release.

K NOW all men by these presents, That I. [Thomas Stivens of London, grocer] have remitted, released, and for ever quitted claim, and by these presents, do for me, my heirs, executors and administrators, remise, release, and for ever quit claim, unto [Jeremiah Bucks, citizen and mercer of London] his heirs, executors and administrators, all and all manner of actions, causes and causes of actions, suits, bills, bonds, writings obligatory, debts, dues, duties, accompts, sum and sums of money, judgments, executions, extents, quarrels, controversies, trespasses, damages and demands whatsoever, both in law and equity, or otherways howsoever, which against the said [Jeremiah Bucks] I ever had, now have, and which I, my heirs, executors and administrators, shall or may have, claim, challenge or demand, for or by reason or means of any matter, cause or thing, from the beginning of the world, to the day of the date of these presents: in witness whereof, I have hereunto set my hand and seal, the [twelfth day of July] and in the year of our Lord [1762.]

Signed, sealed and delivered [being first legally stamped] &c. Tho. Stivens. [L. S.]

Of Wives, Children and Servants.

THE woman, at her marriage, becomes wholly the man's, together with all her moveable goods, and if goods be given to a married woman, they immediately become her husband's: she cannot let, sett, sell, give away, or alienate any thing without her husband's consent, not her very apparel, which at her husband's decease goes to the executor, or administrator of her husband (excepting her necessary apparel) which with the consent of her husband, she may give by will, not otherways by our English laws.

The wife, after her husband's death, having no jointure settled before marriage, may challenge the third part of his yearly rents of free-lands, for her life; and also the thirds of the rents of such free-lands as he sold in his life time, if she did not consent to a fine; but she can claim no thirds of such lands as her husband buys when he has sold them again, and dieth, if he puts another person's name in the deed beside himself, when he bought them. But if her husband dieth without a will in writing, leaving no child, she will claim the thirds, as above, and a third part of the goods for ever, and the other two thirds go to the next of his kindred.

But if she be the wife of a freeman of the city of London (he dying without a will, leaving no child, as before) she will challenge by law, three parts of four of her husband's goods and chattles, and one third of the profits of his free-lands for life, the goods for ever. By a late act of parliament persons since made free are not bound by this law.

The husband must answer to his wife's faults; if she wrong another by her tongue, or by trespass, he must make satisfaction; and pay the debts that she causeth, except he did before give notice; that they should not trust her. This is disputable.

A woman cannot hope to have the thirds of her husband's land, which he mortgaged before marriage, till the money's paid, and the mortgage be cancelled.

A man and wife are joint purchasers of land, to them and their heirs and the survivors, and heirs; and if the husband dies, the wife may sell the land without the consent of their children.

A woman that kills her husband is to be burnt alive.

If a wife brings forth a child, begotten by another before marriage, but born after marriage, the husband must own the child as heir at law.

A wife cannot be a witness for, or against her husband, they two being but one in law.

If a wife brings forth a child during her husband's long absence, though it be some years, yet if he lived all the time within this island, he must father that child; and if that child be her first born son, he shall inherit the

husband's estate, if intailed, or left without a will. This has been lately tried, and decided otherwise.

A woman that doth not hear of her husband for seven years together, may marry another man.

If a woman have no sons, but daughters, the lands, as well as goods, are equally divided among the daughters, who are coheirs.

Man and wife are so fast joined by our law, that they may not be wholly parted by our law, by any agreement between themselves; but only by the sentence of a proper judge, for adultery, &c.

Of Children, Sons and Daughters.

A Father may give all his estate (not intailed) to any one child, the consideration of which keeps some children in awe.

A son at the age of 14, may chuse his guardian, be an executor, may consent to marriage (if not an apprentice) may, by will, give his goods and chattles, and become bound in bonds, or covenants for necessities, food, raiment, schooling, &c.

At the age of 15, he may be sworn to his allegiance to the king.

At 21, he is said to be of full age, may sell land, (which in other countries is not till 25) when the heat of youth is somewhat abated, and they begin to be stayed in mind, as well as in growth.

A daughter at seven years may consent to marry, tho' she may afterwards dissent; at nine she may consent to a jointure.

At 12, she is able to confirm her former consent to marriage, and if at that age she dissent not, she is bound: she may at that age make a will of her goods, and become bound for necessities, &c.

At 13 she may receive her lands into her own hands, that are given; or fall to her. At 21 she may lett, sell, or will her lands.

The eldest son inherits all his father's lands (if the father died without a will) and to the younger children are disposed goods and chattles, and commonly the eldest son's wife's portion.

If a man marry a wife having free land, and she dieth, leaving a child that is heard to cry, tho' it dieth presently, the man shall have the lands for his life. This is called, The courtesy of England.

Of servants.

ORdinary servants are hired commonly for a year (whereby they become inhabitants of that parish) at the end whereof they may be free (giving 3 months warning before) and may place themselves with other masters; only it is accounted discourteous and unfriendly, to take another man's servant, before leave given by his master; and indiscreet to hire a servant without a certificate of his diligence and faithfulness, in the service of his last master, or somewhat to this effect.

Memorandum, That I, G. D. do certify, that J. B. the bearer hereof, hath been an honest and faithful servant unto me. Witness my hand, the 4th of May, 1762.



Forms of Receipts, Notes an Bills, &c. necessary to be understood in order to forming the man of business.

Various forms of acquittances, when an apprentice, or servant receives money for the use of his master, or employer, &c.

RReceived the 27th of July, 1762. of Mr Thomas Adams, Nine pounds twelve shillings, for my matter David Stone, on accompt,

Per James Thompson.

£. 9 12 —

Received the 6th of September, 1762. of Henry Holland, Fifty eight pounds ten shillings and four pence, in full payment for my master Andrew Jones,

Per Matthew Burns.

L. 58 10 4

Received the 24th of August, 1762. of Mr James Johnson and company, Two hundred pounds, for Mr George Bedford and partners,

Per Richard Simpson.

L. 200 —

Received the 22d of February 1762. of the honourable the united East India company, Four thousand pounds sixteen shillings and sixpence, for Mr English and company,

Per Peter Spinks.

L. 4000 16 6

Received the 26th of April, 1762. of the governor and company of the bank of England, Ten thousand fifty pounds eighteen shillings, for Thomas Caxton and company,

Per Edward Carter.

L. 10,050 18 —

Received the 26th of June, 1762. of the worshipful company of mercers, Eighty six pounds for my father Christopher Yates,

Per Edward Yates.

L. 86 —

Received the 24th of April, 1762. of Mr Richard Foxcraft, Fifteen pounds, for a quarter's rent due at Christmas last, for my master George Gibbons,

Per Isaac Jobson.

L 15 — —

Forms of Acquittances.

81

Received the 14th of July, 1762. of Mr Lewis Armstrong, Thirty five pounds eight shillings, in part of a bill of One hundred pounds, payable to Mr Simon Pure or order, due the 10th instant,

Per George Norton.

D. 35 — —

Received the 29th of February, 1762. of Mr Thomas Laurence, by order of Mr John Kent, the sum of One hundred and fifty pounds six shillings and ten pence, on account of Mr Nathaniel Combs, of Appleby: I say received for my masters George Pye and partner,

Per Isaac Taylor.

K. 150 06 10

Forms of Acquittances, upon receipt of money, by masters and men of business themselves.

Rceived the 16th of June, 1762. of Messrs Thomas and George Simpson, Six hundred and forty pounds on account,

Per William Burnet.

L. 640 — —

Received the 4th of September, 1762. of the honorable William Parrot, Esq; the sum of Three hundred and fifty pounds, in full of all demands for self and company.

Per George Dawson.

L. 350 — —

Received the 17th of August, 1762. of Mr James Sims, Thirty pounds, in full for interest of twelve hundred pounds, due at Midsummer last,

Per Thomas Lowther.

L. 30 — —

Received the 19th of September, 1762. by the order and for the use of Mr Benjamin Blundell, of Mr Stephen Carr, Ten pounds ten shillings, and allowed for taxes and repairs, one pound ten, together, the sum of twelve pounds, in full for a quarter's rent, due at Midsummer last,

Per Joseph Rentroll.

L. 12 — —

Received the 23d of June, 1762. of the executors of James late earl of Bath, by the hands of Mr John Thomson, the sum of Sixty five pounds twelve shillings, in full for my half year's annuity due at Lady-day last.

Per Charles Steward.

L. 65 — —

Received the 1st of June, 1762. of Robert Pringle, Esq; and the other owners of the ship Berwick, the sum of One hundred and eight pounds ten shillings, in full for cordage, tackle, and trimming, furnished the said ship,

Per Andrew Shipwright.

L. 108 — —

Promissory Notes by Bankers Apprentices and Servants.

Bristol, September 7th. 1762.

I Promise to pay the honourable Charles Snell, Esq; or bearer, on demand, Fifty pounds,

For Sir Richard Jones and partners,

Per Anthony Timons.

L. 50 — —

Forms of Promissory Notes.

83

London, November 20th, 1762.

I promise to pay the royal African company or bearer, on demand, Four thousand six hundred and sixty four pounds thirteen shillings and sixpence, for my masters George and James,

Per Adam Eve.

L 4664 13 06

Promissory Notes for a man's self, &c.

I Promise to pay to Nathaniel Smith, or bearer, on demand, Nine hundred pounds, June 2d, 1762.

Per Thomas Hunt.

L. 900 —

I promise to pay to the governor and company of the bank of England, Ten thousand pounds, value received this 6th of June, 1762, for myself and partners,

Per Israel Jack.

L. 10,000 —

London, August 2d, 1762.

I promise to pay Mr Daniel Pope, Cashier of his majesty's revenue of excise, or order, forty days after date, Five hundred and thirty pounds, value received,

Per Andrew Cash.

L. 530 —

I promise to pay to Peter Paul, Esq; or order, on demand, Four hundred and ninety pounds, value received this 9th of April, 1762.

Per Peter Vernon.

L. 490 —

I promise to pay to Francis Dove, Esq; or order the sum of sixty pounds, on demand, after the receipt of a bill of exchange drawn the 9th current, by George Trade, on Henry Henly of Northampton, mercer, for the like

sum payable to William Pack, Esq; or order, which the said Frances Dove has indorsed to me, this 25th of December, 1762.

Per James George.

L. 60 — —

A Bill of Debt.

K NOW all men by these presents, That I Michael Pool of the county of Durham, gent. do own and acknowledge myself justly to stand indebted to Alexander Anderson of the county of York, haberdasher, the just sum of twenty-four pounds, of good and lawful money of Great Britain, and which I do hereby promise to pay unto him the said Alexander Anderson, on the 6th day of April, next ensuing the date hereof. Witness my hand this 12th day of September, in the year of our Lord 1762.

Michael Pool.

Another.

M Emorandum, That I Thomas Bell, of the parish of St Ambrose, salter, do owe and am indebted to James Purves of the said place, mercer, the sum of Sixty pounds of good and lawful money of Great Britain, which sum I promise to pay to the said James Purves, his executors, administrators, or assigns, on or before the 23d day of October next. In witness whereof I have hereunto set my hand and seal, the 27th day of June, in the year of our Lord 1762.

Thomas Bell. (L. S.)

Signed, sealed, and delivered,
(being first legally stamped)

in presence of John Thompson.

Michael Wentworth.

A promissory note, mentioning order, is indorseable from one person to another, which is done by the present possessor's writing his name on the back of it, and delivering it up to the party, to whom he intends to assign over his property therein.

The delivering up a promissory note to the person who signed it, is a sufficient voucher of it's being paid, nor is there need for writing a receipt thereon.

Promissory notes, and book debts, if not legally demanded in the space of six years, cannot be recovered by law upon the debtor's pleading the statute, but they are recoverable in chancery.

If you keep a promissory note on demand, in your own hands above three days, and the person it is upon should fail, the loss will be your own; but if he fail within three days, it will light in equity on the person that paid it you.

Promissory Notes.

Borrowed and received of John Derby, Esq; Seventy pounds, which I promise to pay to him, or order, on demand. Witness my hand this 29th of September, 1762.

Per Joseph Jones.

L. 70 0 0

Borrowed and received of Mr Timothy Trusty, Thirty pounds, which I promise to pay to him, or order, three months after date. Witness my hand this 14th of August, 1762.

Per Roger Dods.

L. 30 0 0

I promise to pay to James Forrester, Esq; or order, Two hundred pounds eighteen shillings, on demand, value received. Witness my hand this 17th day of July, 1762.

Per Roger Cook.

L. 200 0 0

N. B. Observe in promissory Notes, that the value received is mentioned, or they are of no force.



A R I T H M E T I C.

After you are compleat in writing, you next proceed to arithmetic, the knowledge of which is so necessary, that scarce any thing in life, and nothing in trade can be done without it.

And first of notation and numeration.

In notation we must observe that all numbers may be, and now generally are expressed by, or composed of the ten figures or characters following, viz.

One,	two,	three,	four,	five,	six,	seven,	eight,	nine,	cypher
1	2	3	4	5	6	7	8	9	0

Nine of these are called significant figures, to distinguish them from the cypher, which itself signifies nothing; but as it is placed (in whole numbers) serves to increase the value of the next figure or figures that stand before it; as 3 is but three; but before the cypher thus, 30, the 3 becomes thirty, &c. — We are to note, that every one, or any of the above nine figures or digits have two values, one certain, and another uncertain: the certain value is, when it stands alone by itself: the uncertain is, when joined or placed with other figures or cyphers: for when any one of these figures stand alone it signifies no more than its own simple value: as 5 is but five, 4 but four, 6 is but six, and 3 no more than three, &c. And this is the certain value of a figure: but when another figure or cypher is annexed, then they are increased in their value ten times: as 5, or five units, or ones, to five tens or fifty, 4 to 4 tens or forty, 6 to 6 tens, or sixty, and 3 to 3 tens, or thirty, as thus, 51, fifty-one: 42, forty-two: 63, sixty three: 34, thirty-four, &c. Again, if any of the

said figures stand in the third place towards the left hand they then signify so many hundreds as singly they express units or ones, as 500 is five hundred, 400 four hundred, 600 six hundreds, and 300 three hundreds, &c. If any of them possess the fourth place towards the left-hand, they are so many thousands as they contain units: and so any, or every figure increases by a tenfold proportion, from the right hand to the left, according to the place it is found or stands in; so that 5 may be but five, or fifty; five hundred, or five thousand: in the first place, 5; in the second, 50; in the third, 500; and in the fourth place, 5000, &c.

The Numeration Table.

Hundreds of thousands of millions	Tens of thousands of millions	Thousands of millions	Hundreds of millions	Tens of millions	Millions	Hundreds of thousands	Tens of thousands	Thousands	Hundreds	Tens	Units	Thousands of millions	Millions	Thousands	Units, or ones
12	11	10	9	8	7	6	5	4	3	2	1				
1	2	3	4	5	6	7	8	9	0	1	2	123	456	789	012
	1	2	3	4	5	6	7	8	9	0	1	12	345	678	901
		1	2	3	4	5	6	7	8	9	0	1	234	567	890
			1	2	3	4	5	6	7	8	9	123	456	789	
				1	2	3	4	5	6	7	8	12	345	678	
					1	2	3	4	5	6	7	1	234	567	
						1	2	3	4	5	6	123	456		
							1	2	3	4	5	12	345		
								1	2	3	4	1	234		
									1	2	3		123		
										1	2		12		
											1				1
											H 2				

For the easier reading of any number, first get the words at the head of the table by heart ; as units, tens, hundreds, thousands, &c. and applied thus. 75, five units, five, and 7 tens, seventy, that is, seventy five. Again, 678 ; 8 units, eight, 7 tens, seventy : and 6 hundred, six hundreds, that is, six hundred seventy eight. Once more, 3456 : 6 units, six ; 5 tens, fifty ; 4 hundreds, four hundred ; 3 thousands, three thousands ; together three thousand four hundred fifty six. Read the 4th line of the table downwards, viz 123456789 ; here the valuation of the figures is from the right hand to the left, as 1 in the ninth place is hundreds of millions, but to be read from the left hand to the right ; thus, one hundred twenty three millions, four hundred fifty six thousand, seven hundred eighty nine. But any number may yet be read more intelligibly, viz. by stops, thus ; make a comma at every third figure or cypher, beginning at the right hand, and so on towards the left, making a stop after every third figure or cypher, as aforesaid, thereby distinguishing every third place into hundreds, as hundreds of units, hundreds of thousands, hundreds of millions, and hundred thousands of millions, &c. and for tryal let's read the first line of the table ; the last place in valuation is hundred thousands of millions, and to be pointed into periods thus 123,456,789,012 ; and read thus, one hundred twenty three thousand, four hundred fifty six millions, seven hundred eighty nine thousand twelve : that is no hundreds, but twelve. Again, read the following number, viz. 276,245,678,921,460 ; here the first point or period is betwixt 4 and 1, and the last betwixt 2 and 6, and to be read thus ; 276 millions of millions, 245 thousands of millions, 678 millions, 921 thousands, 460 units or ones. And thus may any number be read with ease, tho' a large one ; and thus are large numbers or sums expressed, or set out in the exchequer, bank and lottery tickets, &c. as thus, No. 225,156, — 19,478 — and 42,800, &c. the foregoing table of numeration is on the right hand distanced out into periods, for the easier reading thereof.

Numbers to be read and written.

96, Ninty six

242, Two hundred forty two

7924, Seven thousand nine hundred 24

54006, Fifty four thousand and six

524207, Five hundred twenty four thousand 207

4606240, Four millions 606 thousand 240

62700472, Sixty two millions 700 thousand 472

474960204, Four hun. 74 millions 960 thous. 204

4214007042, Four thous. 214 millions 7 thous. 42

470706420042, Four hundred and 70 thousand; 706 millions 420 thousand and 42.

Of numerical letters.

Sometimes numbers are expressed by letters; especially in the bible, to signify the chapter or psalm; at the bottom of title pages of books for the date of the year, and frequently in inscriptions of funeral monuments, &c. for which reason 'tis necessary to know how to read them. Therefore observe, that I. stands for 1, or one unite, II. for 2. III. for 3. IV. for 4. V. for 5. VI. for 6. VII. for 7. VIII. for 8. IX. for 9. X. for 10. XI. for 11. XII. for 12. XIII. for 13. XIV. for 14. XV. for 15. XVI. for 16. XVII. for 17. XVIII. for 18. XIX. for 19. XX. for 20. XXI. for 21. &c. XXX. for 30. XXXI. for 31. &c. XL. for 40. XLV. for 45. &c. L. for 50. LI. for 51. &c. LX. for 60. LXI. for 61. &c. LXX. for 70. LXXI. for 71. &c. LXXX. for 80. LXXXI. for 81. &c. XC. for 90. XCI. for 91. &c. C. for 100. CC. for 200. CCC. for 300. CCCC. for 400. D. or ID. for 500. DC. for 600. &c. M. or CID for 1000. &c. Thus the present year 1762. is wrote MDCCLXII.

ADDITION:

IS the putting together two or more numbers or sums in order to make them one total, or whole sum.

Here we must always observe to set the numbers to be added, orderly one under the other: that is, units under, units, tens, under tens, hundreds under hundreds, &c. as in the subsequent examples.

Addition of numbers of one denomination.

Yards

Gallons

Pounds

Tens
UnitsHund.
Tens
UnitsX of Th.
Thous.
Hund.
Tens
Units

24

756

57762

46

532

39944

68

478

67222

82

696

79674

24

422

02462

42

678

00390

286

3562

247484

In addition of simple numbers, whether it be yards, gallons, pounds, or any thing else, remember to carry 1 for every 10 you find in the row or rank of figures being units to the next row of tens; and the like from the rank of tens to the row of hundreds, &c. and whatever it makes in the last, you must set it down, amount to what it will. Thus:

The numbers above are set down in order, as before directed; that is, units under units, tens under tens, &c. as may be plainly understood, by being indicated at the head of each row or rank, with units, tens, hundreds, &c. Then in casting up each example, to know its total, I begin at the right hand, or unit rank, of the first example, and say 2 and 4 is 6, and 2 is 8, and 8 is 16, and 6 is 22, and four is 26; in which row there are two tens and 6 over; wherefore I set down 6 just under its own rank, and carry 2 to the next or last row, and say, 2 that I carried and 4 makes 6, and 2 is 8, and 8 is 16, and 6 is 22, and 4 is 26, and 2 is 28; and it being the last row, I set down the amount, viz. 28; so that the total number of yards is found to be (by the method) at the bottom 286. And the next, or second example, is found by the same method to be 3562 gallons. And in the third and last example, the total number of pounds is found to be 247484. and so the total of any other example of the same kind, viz. simple numbers of one denomination, may be found. Note, that when any of the ranks amount to just 10, 20, 30, 40, 50, &c. then

you must set down the 0, under its proper rank, and carry either 1, 2, 3, 4, or 5, according to the number of tens that you find, to the next row; and so you must always do, when it so happens, whether in the first, second or third row, or in any other except the last, where what it amounts to must be set down without any reserve or carriage in the mind, because there is no other row or rank to carry to, as was hinted before.

Addition of Mixed Numbers.

Observe, 4 farthings make 1 penny, 12 pence make 1 shilling, 20 shillings make 1 pound sterling,

Libra in Latin signifying a pound, *l.* therefore stands for pounds.

Solidus in Latin signifying a shillings, *s.* therefore stands for shillings.

Denarius in Latin signifying a penny, *d.* therefore stands for pence.

Quadrans in Latin, signifying a farthing, *q.* therefore stands for farthings.

Observe; that pounds be set directly under pounds, shillings under shillings, pence under pence, and farthings under farthings.

But before you proceed, get this table of pence by heart, thus, 30*d.* is half-a-crown, then 60*d.* is 5*s.* again 40*d.* is 3*s.* 4*d.* then 80*d.* is 6*s.* 8*d.* again 50*d.* is 4*s.* 2*d.* then 100*d.* is 8*s.* 4*d.* &c. 100*lb.* of cheese at 3*d.* the *lb.* comes to three times 8*s.* 4*d.* or 100 faggots, 120 to the hundred, at 1*d.* a piece, comes to 10*l.* in the table.

<i>d.</i>		<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>l.</i>	<i>s.</i>
20	} is	1	8	30	} is	1	10
30		2	6	40		2	00
40		3	4	50		2	10
50		4	2	60		3	00
60		5	0	70		3	10
70		5	10	80		4	00
80		6	8	90		4	10
90		7	6	100		5	00
100		8	4	110		5	10
110		9	2	120		6	00
120		10	0	130		6	10

Then for every crown that a hundred of faggots cost, reckon an half-penny; if the faggot costs me three half-pence, one hundred will cost 15s. because there is three crowns in it.

Note, That young men may improve themselves very much in reckoning up divers things, after they have by heart the table afore said, and learning this rule of addition.

An hundred yards of tape at one penny the yard, the table tells you comes to 8s. 4d.

An hundred yards of ferreting at one penny half penny the yard.

In the table 100d. is - - - - - 8s. 4d.

And half the sum is - - - - - 4s. 2d.

Answer 12s. 6d.

If one pound of any thing costs 7d. halfpenny, what will 280 lb-weight cost after that rate; performed by addition thus,

	l.	s.	d.
200 sixpences makes 100s,	5	—	—
80 sixpences make	2	—	—
200 pence	16	8	—
80 pence is a noble, or	6	8	—
200 half pence is 100 pence, or	8	—	4
80 halfpence make 10 groats, or	3	4	—
Price of the goods	8	15	0

Note, Now you have by heart the table of pence, you may cast up any sum of money without dotting, for when you know the number of pence, you may by this table, know how many shillings to carry to the shillings place, and for the number of shillings in the row of shillings you know that 70s. is 3l. 10s.

(10) (20) (12) 12 set over the pence, shews that
l. s. d. for every 12 I find in the pence row
18 16. 1 I am to carry 1 to the shillings; for
20 11. 7 I am to carry 1 to the shillings;
23 18. 9 so many 20s. as I find in the shillings
22 17 10 row, 1 to the place of pounds as a
fore said.

But the easiest way of casting up this sum (for the young learner) is by using dots, thus:

136	4	3
-----	---	---

Beginning at the pence; I say 10d, and 9d. is 19d. where against the 9 I set a dot for 12d. (or you may make your dots on waste paper) and what is more or above 12 I carry to the next figure, viz. 7 and it makes 14, where I set a dot also for 12, and carry the remaining 2 to the 1 on the top, which makes 3, which 3d. I set between the lines, as you see in the example.

Next, I look how many dots there are, and find 2, which I carry to the row of shillings, saying, 2 that I carry and 17 is 19, and 18 is 37, where against the 18 I set a dot for 20s. or 1l. and carry the odd 17s. upwards saying, 17s. I carry and 11 is 28, where I set a dot against the 11 for another 20s. and carry the remaining 8 to the 16 on the top, saying 8 I carry and 16 makes 24s. where I set down a dot for 20s. and set between the lines the remaining 4s. under the row of shillings.

Note, That you may sum up the shillings row without dotting, thus; saying, 2s. that I carry from the place of pence, and 7 is 9, and 8 is 17, and 1 is 18, and 6 is 24, and 10 is 34, and 10 is 44, and 10 is 54, and 10 is 64, that is 3l. 4s. then the 4s. being set between the lines, the 2l. is to be carried to the pounds.

Lastly, The 3 dots for the 3l. found in the place of shillings, I carry to the pounds, saying, 3 that I carry and 3 is 6, and 3 is 9, and 7 on the top makes 16, the remaining 6 I set between the lines, under the first row of the pounds, and I carry 1 to the last row, saying, 1 that I carry, and 7 is 8, and 2 is 10, and 2 is 12, and 1 is 13, which being set between the lines, the whole sum comes to 136l. 4s. 3d.

Note, That when you are to write a bill of several small parcels, begin it in order of pounds, shillings, and pence, 0 - 3 - 9, and when you are to set down 16d. set down 1s. 4d. or to set down 23s. you must set 1l. 3s. 0d.

If a man owes me the three following sums of money, what come they to in whole?

l. s. d. Note, That the $7\frac{1}{2}d.$ is seven pence
 202. 17. $7\frac{1}{2}$ halfpenny; and $1\frac{1}{4}d.$ is one penny
 703. 1. 9 farthing; and in the total sum be-
 906. 10. $1\frac{1}{2}$ tween the lines $5\frac{1}{4}d.$ is five pence three
 farthings.

1812. 9. $5\frac{1}{2}$ To cast up the three sums I do thus,
 the $\frac{1}{4}$ which is the farthing, and the
 $\frac{1}{2}$ the halfpenny, make $\frac{3}{4}$ or three
 farthings, which is set between the lines; next $1d.$ and
 $9d.$ is $10d.$ and $7d.$ is $17d.$ where against the 7 is set a
 dot for $12d.$ and set the odd $5d.$ between the lines.

Next, I that I carry from the place of pence and $10s.$
 is $11s.$ and $1s.$ is $12s.$ and $17s.$ is $29s.$ I set down the re-
 maining $9s.$ between the lines, and the $20s.$ making $1l.$
 I carry to the place of pounds;

Saying, I that I carry and 6 is 7, and 3 is 10, and 2
 is 12, where I set a dot for 10, and set the remaining 2
 between the lines.

Next, I carry the dot for 10. as 1 to the middle row
 (being all cyphers) and proceed to the last row;

Saying, 9 and 7 is 16, and 2 at the top is 18, which I
 set between the lines, and the whole sum comes to
 $1812l. 9s. 5\frac{1}{2}d.$

Addition of Money.

Money owing and money received, as follows.

(1)					(2)				
Owing to	Mr	l.	s.	d.	Received from	Mr	l.	s.	d.
	Mr	4	12	6		Mr	46	10	9
	Mr	7	06	9		Mr	79	16	0
	Mr	4	12	0		Mr	42	18	3
	Mr	0	17	7		Mr	66	12	4
	Mr	5	06	6		Mr	90	16	0
	Mr	4	12	3		Mr	84	17	6
	Mr	6	00	0		Mr	24	12	0
	Mr	5	15	4		Mr	60	10	0
45 02 11					496 12 10				

I begin and say, 4 and 3 is 7, and 6 is 13, and 7 is 20, and 9 is 29, and 6 makes 35*d.* now 35*d.* according to the table, is 2*s.* 6*d.* and 5*d.* makes 2*s.* 11*d.* I set down 11 exactly under the rank of pence, and say, 2*s.* that I carry (which I do to the rank of shillings) and 5 is 7, and 2 is 9 (for I only take the unit rank of shillings) and 6 is 15, and 7 makes 22, and 2 is 24, and 6 is 30, and 2 makes 32; and now being come to the top of the sum, and it making 32, I come down with the tens of shillings, saying 32 and 10 is 42, and 10 is 52, and 10 is 62, and 10 is 72, and 10 makes 82*s.* and the table telling me that 80*s.* is 4*l.* I know therefore 82*s.* is 4*l.* 2*s.* wherefore I set down the remaining 2*s.* just under the row of shillings, and carry 4*l.* to the pounds, saying, 4 that I carry, and 5 is 9, and 6 is 15, and 4 is 19, and 5 is 24, and 6 is 30, and 4 is 34, and 7 is 41, and 4 is 45*l.* so that the total of these several sums of money due to those several persons, amounts to 45*l.* 2*s.* 11*d.* as in the example.

In the second example of money received, I begin at the right hand and say, 6 and 4 is 10, and 3 is 13, and 9 makes 22, and 22*d.* being 1*s.* 10*d.* I set down 10, and carry one to the shillings, saying, 1 that I carry and 2 is 3, and 7 is 10, and 6 is 16, and 2 is 18, and 8 is 26, and 6 makes 32; then I come down with the tens, saying, 32 and 10 makes 42, &c. and I find at the bottom it comes to 112*s.* which making 5*l.* 12*s.* I set down 12*s.* and carry 5*l.* to the pounds, saying, 5 that I carry and 4 is 9, &c. I find at the top it amounts to 36, wherefore I set down 6 exactly under its own rank, viz. the rank of units of pounds, and carry 3 for the tens that are in 30 (for at all times in the first denominations of addition, whether of money, weight, or measure; that is in the denomination of pounds, tens, or yards, you must cast them up as sums of one denomination; that is, for every ten carrying 1 to the next, &c.) saying, 3 that I carry, and 6 is 9, and 2 is 11, and 8 is 19, &c. and I find then at the top it comes to 49; wherefore I set down 49 before the 6, and the total amount to 496*l.* 12*s.* 10*d.*

A Table of English Coins.

Of Gold.

		l.	s.	d.
A Jacobus,	} Value	0	5	0
A Carolus,		1	3	0
A Guinea,		1	1	0
A half Guinea,		0	10	6

Of Silver.

A Crown,	} Value	0	5	0
A half Crown,		0	2	6

The names of the rest speak their value, as a shilling, a sixpence, a groat, or 4d. a threepence, a twopence, a penny.

Of Copper.

A Halfpenny,

A Farthing.

Besides the above mentioned, we have still in use the names of some other pieces, which are now but imaginary, viz.

A Mark,	} Value	0	13	4
An Angel,		0	10	0
A Noble,		c	6	8

Of Troy weight.

The least fraction or denomination of weight used in England, is a grain of wheat gathered out of the middle of the ear, and well dried; from whence are produced those following tables of weight, called Troy weight.

32 Grains of wheat	} make	14 Artificial grains
24 Artificial grains		1 Penny weight
20 Penny weight		1 Ounce
12 Ounces		1 Pound.

And therefore,

lb.	oz.	pw	grains.
1	12	20	24
1	22	240	5760
	1	20	480
		1	24

Troy weight serveth to weigh bread, gold, silver and electuaries. It regulateth and prescribeth a form how to keep the money of England at a certain standard. The goldsmiths have divided the ounce troy weight into other parts, which they generally call mark weight. The denominative parts thereof are as followth, viz. a mark (being an ounce troy) is divided into 24 equal parts, called carects, and each carect into 4 grains; so that in a mark are 96 grains. By this weight they distinguish the different firmness of their gold; for if to 22 carects of gold be put 2 carects of alloy (which is of silver, copper, or other baser metal, with which they use to mix their gold or silver to abate the fineness thereof) both making when mixed but an ounce or 24 carects, then this gold is said to be 22 carects fine; for if it come to be refined, the 2 carects of alloy will fly away, and leave only 22 carects of pure gold: the like to be considered of a greater or lesser quantity. And as the fineness of the gold is estimated by carects, so the fineness of silver is distinguished by ounces; for if a pound of it be pure, and loseth nothing in refining, such silver is said to be 12 ounces fine; but if it loseth any thing, it is said to contain so much fineness as the loss wanteth of 12 ounces; as if it lost 1 ounce 14 penny weight, then it is said to be 10 ounces 6 penny weight fine, and that which loseth 2 ounces 4 penny weight 16 grains, is said to be 9 ounces 15 penny weight 8 grains fine, &c. the like to be understood of a greater or less quantity.

Of apothecaries weight.

The apothecaries have their weights deduced from troy weight, a pound of troy being the greatest integer; a table of whose division and subdivision followeth, viz.

And therefore,

		lb.	oz.	sc.	dr.	gr.
12 Ounces	} make {	1 Pound	1—12—	8—	3—	20
8 Drams		1 Ounce	—	—	—	—
3 Scruples		1 Dram	1—12—	96—	288—	5760
20 Grains		1 Scruple	1—	8—	24—	480
					1—3—	60
					1—	20

Thus much concerning troy weight, and its derivative weights, which, as was said before, serveth to weigh bread, gold, silver, and electuaries. Now, besides troy weight, there is another kind of weight used in England, commonly known by the name of avoirdupois weight (7 pound of which is equal to 14 ounces, 12 penny weight troy weight): and it serveth to weigh all kind of grocery wares, also butter, cheese, flesh, wax, tallow, rosin, pitch, lead, and all such kind of garble; the table of which weight is as followeth.

4 Quarters of a dram	} make {	1 Dram
16 Drams		1 Ounce
16 Ounces		1 Pound
28 pounds		1 Quarter of a hundred
4 Quarters		1 Hund. wt. or 112 lb.
20 Hundred		1 Tun

Tun.	C.	qrs.	lb.	oz.	dr.	qrs.
1—	20—	4—	28—	16—	16—	4—
1—	20—	80—	2240—	25846—	573440—	2293760
	1—	4—	112—	1792—	28673—	114688
		1—	28—	448—	7168—	28672
			1—	16—	256—	1024
				1—	16—	64
					1—	4

Wool is weighed with this weight, but only the divisions are not the same, a table whereof followeth.

A table of the denominative parts of wool weight

7 Pounds	}	make	1 Clove
2 Cloves			1 Stone
2 Stones			1 Todd
6 Todd 1 stone			1 Wey
2 Weys			1 Sack
12 Sacks			1 Last

Last.	sack.	wey.	todd.	stone.	clove.	lb.
1	12	2	6 $\frac{1}{2}$	2	2	7
1	12	24	156	312	624	4368
	1	2	13	26	52	364
		1	6 $\frac{1}{2}$	13	26	182
			1	2	4	28
				1	2	14
					1	7

Note, that in some counties the wey is 156lb. avoirdupois, as the Suffolk wey; but in Essex, there is 336 lb. in a wey.

The least denominative part of liquid measure is a pint, which was formerly taken from troy weight (1 pound of wheat, troy weight, making a pint of liquid measure); but in regard of the difference between the brewers and farmers of his majesty's excise, concerning the gauging of vessels, occasioned by the different opinions of artists concerning the solid inches in a gallon, it was lately decided by act of parliament; the statute now making 282 solid inches in a beer gallon, and 231 in a wine gallon: and consequently the pint beer measure to contain 35 $\frac{1}{4}$ solid inches, and the pint wine measure to contain 28 $\frac{1}{4}$ cubical or solid inches. From whence is drawn the following table.

A table of liquid measure.

35½ Cubical inches	}	make	1 Pint beer measure
287 Cubical inches			1 Pint wine measure
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
8 Gallons			1 Firkin of ale, soap, or herring
9 Gallons			1 Firkin of beer
10 Gallons and a half			1 Firkin of salmon or eels
2 Firkins			1 Kilderkin
2 Kilderkins			1 Barrel
42 Gallons			1 Tierce of wine
63 Gallons			1 Hogshead
2 Hogsheads			1 Pipe or butt
2 Pipes or butts			1 Tun of wine

And therefore,

Tuns. pipes. hds. gall. pints.

1—2—2—63—8

1—2—4—252—2016

1—2—126—1008

1—63—504

1—8

The least denominative part of dry measure is also a pint, and this is likewise taken from troy weight: the table of whose division followeth.

The table of dry measure.

1 Pound troy	}	make	1 Pint
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
2 Gallons			1 Peck
4 Pecks			1 Bushel
4 Bushels			1 Comb
2 Combs			1 Quarter
4 Quarters			1 Chaldron
5 Quarters			1 Wey
2 Weys			1 Last

And therefore,

Last. wey. qrs. com. bus. pecks. gall. pints.

1—2—5—2—4—4—2—8

1—2—10—20—80—320—640—5120

1—5—10—40—160—320—2560

1—2—8—32—64—512

1—4—16—32—256

1—4—8—64

1—2—16

1—8

The least denominative of long measure is a barley-corn well dried, and taken out of the middle of the ear; whole table of parts followeth.

3 Barley corns	}	make	1 Inch
12 Inches			1 Foot
3 Feet			1 Yard
3 Feet, 9 inches, or a yard and a quarter			1 Ell English
6 Feet			1 Fathom
5 Yards and a half			1 Pole, perch or rood
40 Poles or perches			1 Furlong
8 Furlongs			1 English mile

And therefore,

Mile. furl. poles. yards. feet. inches. barley corns.

1—8—40—5 $\frac{1}{2}$ —3—12—3

1—8—320—1760—5280—63360—190080

1—40—220—660—7920—23760

1—5 $\frac{1}{2}$ —16 $\frac{1}{2}$ —198—594

1—3—36—108

1—12—36

1—3

And note, that the yard, as well as the ell is usually divided into 4 quarters, and each quarter into 4 nails.

Note also that a geometrical pace is 5 feet, and there are 1056 such paces in an English mile.

The parts of the superficial measure of land, are such as are mentioned in the following table, viz.

A table of land measure.

40 Square poles or perches	}	make	{	1 Rood or quarter of an acre
4 Roods				1 Acre.

By the foregoing table of long measure, you are informed what a pole, or, which is all one, a perch, is; and by this, that 40 square perches is a rood. Now, a square perch is a superficies very aptly resembled by a square trencher, every side thereof being a perch of $5\frac{1}{2}$ yards in length, 40 of them is a rood; and 4 roods an acre; so that a superficies that is 40 perches long and 4 broad is an acre of land, the acre containing in all 160 square perches.

The least denominative part of time is 1 minute, the greatest integer being 1 year, from whence is produced this following table.

Table of time.

60 Minutes	}	make	{	1 Hour
24 Hours				1 Day natural
7 Days				1 Week
4 Weeks				1 Month
13 Months, 1 day, 6 hours				1 Year

But the year is usually divided into 12 unequal calendar months; whose names, and the number of days they contain follow, viz.

Days.		
January	31	} So that the year containeth 365 days and 6 hours, but the hours are not reckoned, but only every 4th year, and then there is a day added to the latter end of February, and then it containeth 29 days, and that year is called leap year, and containeth 366 days.
February	28	
March	31	
April	30	
May	31	
June	30	
July	31	
August	31	
September	30	
October	31	
November	30	
December	31	
365		

And here note, that as the hour is divided into 60 minutes, so each minute is subdivided into 60 seconds, and each second into 60 thirds, and each third into 60 fourths, &c.

The tropical year, by the exactest observation of the most accurate astronomers, is found to be 365 days, 5 hours, 49 minutes, 4 seconds, and 21 thirds.

The following example will make this rule plain to the learner. Thus these following sums being given to be added, viz. 136*l.* 13*s.* 4*d.* 2*qrs.* and 79*l.* 7*s.* 10*d.* 3*qrs.* and 33*l.* 18*s.* 9*d.* 1*qr.* and also 15*l.* 9*s.* 5*d.* 0*qrs.* the numbers being disposed according to order will stand as in the margin. Then begin at

the denomination of farthings, and add them up; saying 1 and 3 are 4 and 2 makes 6. Now, I consider that 6 farthings; are 1 penny and 2 farthings; wherefore I set down the 2 farthings in its place under the line, and keep 1 in mind to be added to the next denomination of pence.

<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>qrs.</i>
136	13	4	2
79	7	10	3
33	18	9	1
15	9	5	0
265	9	5	2

Then I go on, saying, 1 that I carried and 5 are 6, and 9 are 15, and 10 are 25, and 4 are 29. Now I consider, that 29 pence are 2 shillings and 5 pence; therefore I set the 5 pence in order under the line, and keep 2 in mind for 2 shillings, to be added to the shillings. Then I go on, saying, 2 that I carried and 9 are 11, and 18 are 29, and 7 are 36, and 13 are 49. Then I consider that 49 shillings are 2 pounds and 9 shillings; wherefore I set the 9 shillings under the line, and carry 2 for the 2 pounds to the next and last denomination of pounds; and proceed, saying, 2 that I carry and 5 makes 7, and 3 are 10, and 9 are 19, and 6 are 25. Then I set down 5, and carry 2 for the 2 tens, and proceed; saying, 2 that I carried and 1 is 3, and 3 are 6, and 7 are 13, and 3 makes 16. And I set down 6, and carry 1 for the 10, and go on; saying, 1 that I carried and 1 are 2; which I set in its place under the line, and the work is finished. And thus I find the sum of the foresaid numbers to be 265*l.* 9*s.* 5*d.* 2*qrs.* This to the ingenious practitioner is sufficient. But I shall for the further illuminating of the weaker apprehensions,

explain the operation of another example in troy weight. And here the learner must take notice of the table of troy weight mentioned before. The numbers given in this example are, 38 *lb.* 7 *oz.* 13 *pw.* 18 *gr.* and 50 *lb.* 10 *oz.* 10 *pw.* 12 *gr.* and 42 *lb.* 8 *oz.* 5 *pw.* 16 *gr.* And in order to the addition thereof, I place them as you see, and proceed to operation; saying, 16 and 12 are 28, and 18 are 46. Now, because 24 grains make 1 penny weight, 46 grains are 1 penny weight, and 22 grains; wherefore I set down 22, and carry 2 for the penny weight: and going on, I say, 1 that I carry and 5 are 6, and 10 are 16, and 13 are 29; which is 1 ounce and 2 penny weight. I set down 9 in its place under the line, and carry one to the ounces; saying, 1 that I carry and 8 are 9, and 10 are 19, and 7 are 26. And because 26 ounces make 2 pounds, 2 ounces, I set down 2 for the ounces, and carry 2 to the pounds going on, 2 that I carry and 2 are 4, and 8 makes 12; that is 2 and go 1: then 1 I carry and 4 are 5, and 5 are 10, and 3 makes 13; which I set down as in the margin, and the work is finished: and I find the sum of the said numbers to amount to 132 *lb.* 2 *oz.* 9 *pw.* 22 *gr.* This is sufficient for the understanding the following examples, or any other that shall come to thy view. The way of proving these, or any sum in this rule, is shewed immediately after the ensuing examples.

Addition of troy weight.

<i>lb.</i>	<i>oz.</i>	<i>pw.</i>	<i>gr.</i>	<i>lb.</i>	<i>oz.</i>	<i>pw.</i>	<i>gr.</i>
15	7	13	12	145	9	12	18
18	6	4	20	726	8	14	10
11	10	16	18	389	7	6	13
9	4	10	22	83	10	16	20
19	11	18	4	130	0	10	12
22	0	0	0	74	7	18	0
97	5	4	4	1550	8	19	1

Addition of Apothecaries weight.

lb.	oz.	dr.	sc.	gr.	lb.	oz.	dr.	sc.	gr.
48	7	1	0	14	60	3	4	0	10
74	5	5	2	10	48	10	6	0	14
64	10	7	1	11	34	8	2	1	15
17	8	1	0	16	18	11	2	2	11
34	9	6	1	9	160	7	1	2	15
					35	2	5	1	7
240	5	6	1	0					
					353	7	7	0	12

Addition of Avoirdupois weight.

Tuns.	C.	qrs.	lb.	lb.	oz.	gr.
75	13	1	15	36	10	12
48	7	3	21	22	11	13
60	11	1	17	11	7	4
21	7	0	25	15	4	10
12	16	0	11	20	10	9
218	17	0	5	106	13	0

Addition of liquid measure.

Tuns.	pipes.	hhds.	gall.	Tuns.	hhds.	gall.	pints.
45	1	1	48	30	3	40	4
15	0	1	17	12	0	28	6
38	0	0	47	47	5	60	5
12	1	0	56	57	3	22	3
21	1	1	18	17	0	0	0
133	0	1	60	168	1	26	2

Addition of dry measure.

Chald.	qrs.	bush.	pec.	Qrs.	bush.	pec.	gall.
48	3	7	3	17	3	1	1
13	1	4	0	50	1	3	0
54	0	6	2	14	5	3	1
16	3	6	1	40	2	0	1
40	1	0	1	30	0	3	0
173	3	0	3	152	5	3	1

Addition of long measure.

Yards.	qrs.	nails.	Ells.	qrs.	nails.
35	3	3	57	1	3
14	1	2	13	3	2
74	2	3	48	2	1
38	0	1	50	1	0
30	1	0	74	0	2
15	0	0	17	1	0
208	1	1	260	0	0

Addition of land measure.

Acres	roods	perches	Acres	roods	perches
12	3	18	86	1	36
14	0	24	47	3	24
30	2	19	73	2	18
48	3	30	60	0	7
28	1	38	4	2	8
50	3	26	14	1	14
185	3	35	286	3	27

The proof of addition.

Addition is proved after this manner. When you have found out the sum of the number given, then separate the uppermost line from the rest with a stroke or dash of the pen, and then add them all up again as you did before, leaving out the uppermost line; and having so done, add the new invented sum to the uppermost line you separated; and if the sum of those two lines be equal to the sum first found out,

then the work was performed true, otherways not. As for example: let us prove the first example of addition of money, whose sum we found to be 265l. 9s. 5d. 2qrs. and which we prove thus. Having separated the uppermost number from the rest by a line, as you see in the margin; then add the same together again, leaving out the said uppermost line, and the sum thereof I set under the first sum

l.	s.	d.	q.
136	13	4	2
79	7	10	3
33	18	9	1
15	9	5	0
265	9	5	2
128	16	1	0
265	9	5	2

or, true sum, which doth amount to 128l. 16s. 1d. 0 qrs. then again I add this new sum to the uppermost line that before was separated from the rest, and the sum of those two is 265l. 9 s. 5 d. 2 qrs. the same with the first sum; and therefore I conclude that the operation was rightly performed.

The main end of addition in questions resolvable thereby, is to know the sum of several debts, parcels, integers, &c. Some questions may be these that follow.

Quest. 1. There was an old man whose age was required. To which he replied, I have seven sons, each having two years between the birth of each other; and in the 44th year of my age my eldest son was born, which is now the age of my youngest. I demand, What was the old man's age?

Now, to resolve this question, first set down the
 father's age at the birth of the first child, which 44
 was 44; then the difference between the oldest 12
 and the youngest, which is 12 years; and then 44
 the age of the youngest, which is 44; and then 100
 add them all together; and their sum is 100, the
 compleat age of the father.

Quest. 2. A man lent his friend at several times these several sums, viz. at one time 63l. at another time 50l. at another time 48l. at another time 136l. Now, I desire to know how much he lent him in all?

Set the sums lent under one another as you see
 in the margin; and then add them together, and 63
 you will find the sum to amount to 317l. which is 50
 the total of all the several sums lent, and so much 48
 is due to the creditor. 136

Quest. 3. From London to Ware is 26 miles, thence
 to Huntington 29 miles, thence to Stamford 21 miles,
 thence to Tuxford 36 miles, thence to Wentbridge 25
 miles, from thence to York 20 miles. Now I desire to
 know how many miles it is from London to York, ac-
 cording to this reckoning?

Now to answer this question, set down the several distances given, as you see in the margin; and add them together, and you will find their sum to amount to 151; which is the true distance in miles between London and York.

Quest. 4. There are two numbers, the least whereof is 40, and the difference 14. I desire to know what is the greatest number, and also what is the sum of both? First set down the least, viz. 40, and 14 the difference; and add them together, and the sum is 54. Greatest for the greater number. Then I set 40 Least (the least) under 54, (the greatest,) and add them together, and their sum is 94, equal to the greatest and least numbers.

Of subtraction of whole numbers.

1. **S**ubtraction is the taking of a lesser number out of a greater of like kind, whereby to find out a 3d number; being or declaring the inequality, excess or difference between the numbers given. Or, subtraction is that by which one number is taken out of another number given, to the end that the residue or remainder may be known; which remainder is also called the rest, remainder or difference of the numbers given.

2. The number out of which subtraction is to be made, must be greater, or at least equal with the other number given. The higher or superior number is called the major number; and the lower or inferior is called the minor number; and the operation of subtraction being finished, the rest or remainder is called the difference of the numbers given.

3. In subtraction, place the numbers given respectively the one under the other, in such sort as like degrees, places, or denominations may stand in the same series viz. units under units, tens under tens, pounds under pounds, &c. feet under feet, and parts under parts,

300. This being done, draw a line underneath, as in addition.

4. Having placed the numbers given as is before directed, and drawn a line under them, subtract the lower number (which in this case must always be less than the uppermost) out of the higher number, and subscribe the difference or remainder respectively below the line; and when the work is finished, the number below the line, will give you the remainder.

As for example: let 364521 be given to be subtracted from 795836. I set the lesser under the greater, as in the margin, and draw a line under them; then beginning at the right hand, I say, 1 out of 6 and there remains 5, which I set in order $\begin{array}{r} 795836 \\ 364521 \\ \hline \end{array}$ under the line. Then I proceed to the next, saying 2 from 3 rests 1, which I note also under the line. And thus I go on till I have finished the work. And then I find the remainder or difference to be 431315.

5. But if it so happen, as commonly it doth, that the lowermost number or figure is greater than the uppermost; then, in this case, add 10 to the uppermost number, and subtract the said lowermost number from their sum, and the remainder place under the line; and when you go to the next figure below, pay an unit, by adding it thereto for the 10 you borrowed before, and subtract that from the higher number of figures. And thus go on till your subtraction be finished. As for example; let 437503 be given, from whence it is required to subtract 153827. I dispose of the numbers as is before directed, and as you see in the margin; then I begin, saying, 7 from 3 I cannot, but, adding 10 thereto, I say, 7 from 13, and there remains 6; which I set $\begin{array}{r} 437503 \\ 153827 \\ \hline \end{array}$ under the line in order. Then I proceed to the next figure, saying 1 that I borrowed and 2 is 3 from 0 I cannot, but 3 from 10, and there remains 7; which I likewise set down as before. Then 1 that I borrowed and 8 is 9 from 5 I cannot, but 9 from 15, and there remains 6. Then 1 I borrowed and 3 is 4 from 7, and there remains 3. Then 5 from 3 I cannot but 5 from 13, and there remains 8. Then 1 I borrowed and 1 are 2 from 4, and

there rests 2. And thus the work is finished. And after these numbers are subtracted from one another, the inequality, remainder, excess, or difference, is found to be 283676. Examples for thy further experience may be these that follow.

From 3469916

Take 738642

Rests 2731274

From 361376

Take 3864

Rests 355712

6. If the sum or number to be subtracted is of several denominations, place the lesser sum below the greater, and in the same rank and order as is shewed in addition of the same numbers. Then begin at the right hand; and take the lower number out of the uppermost, if it be lesser; but if it be bigger than the uppermost, then borrow an unit from the next greater denomination, and turn into the parts of the less denomination, and add those parts to the uppermost, noting the remainder below the line. Then proceed, and pay one to the next denomination for that which you borrowed before; and proceed in this order, until the work be finished. An example of this rule may be this that followeth. Let 375 *l* 13 *s* 7 *d* 1 *qr* be given, from whence let it be required to subtract 57 *l* 16 *s* 3 *d* 2 *grs*. In order whereunto I place the numbers as you see in the margin. And thus I begin at the least denomination, saying, 2 from 1 I cannot, therefore I borrow 1 penny from the next denomination, and turn it into farthings, which is 4; and adding 4 to 1, which is 5, I say, 2 from 5, and there remains 3; which I put under the line. Then going on, I say, 1 that I borrowed and 3 is 4 from 7, and there rests 3. Then going on, I say, 16 from 13 I cannot, but borrowing 1 pound, and turning it into 20 shillings, I add it to 13, and that is 33, wherefore I say, 16 from 33, and there remains 17, which I set under the line; and go on, saying 1 that I borrowed and 7 is 8 from 5 I cannot, but 8 from 15, and there remains 7; the 1 that I borrowed and 5 is 6

from 7, there rests 1, ad 0 from 3 rests 3. And I find the remainder or difference to be 317/17r 3d 3grs.

An example of troy weight may be this. I would subtract 17lb 10oz 11pw 20gr from 24lb 5oz 0pw 8gr. I place the numbers according to the rule; and begin, saying 20 from 8 I cannot, but borrow 24 5 0 8
1 penny weight which is 24 grains, 17 10 11 20
and add them to 8, and then are 32, wherefore I say, 20 from 32 rests 6 6 8 12

12. Then 1 that I borrowed and 11 is 12 from 0 I cannot, but 12 from 20, borrowing an ounce, which is 20 penny weight, and there remains 8. Then 1 that I borrowed and 10 is 11 from 5 I cannot, but 11 from 17, and there rests 6. Then 1 that I borrowed and 7 is 8 from 4 I cannot, but 8 from 14, and there rests 6. Then 1 that I borrowed and 1 is 2 from 2, and there rests nothing, So that I find the remainder or difference to be 6lb 6oz 8pw 12gr.

7. It many times happeneth, that you have many sums or numbers to be subtracted from one number; as suppose a man should lend his friend a certain sum of money, and his friend hath paid him part of his debt at several times. Then before you can conveniently know what is still owing, you are to add the several numbers or sums of payments together, and subtract their sum from the whole debt, and the remainder is the sum due to the creditor. As suppose A lendeth to B 564/16s 10d and B hath repaid him 79/

16s 8d at one time, Lent 564 16 10
and 163/18s 11d at another time, and 241/15s 8d at another time; and you would know how the account standeth between them, Paid at several payments { 79 16 8
163 18 11
241 15 8
Paid in all 485 11 3
Remains 79 5 7
A. In order whereunto I first set down the sum which A lent, and draw a line underneath it; then under that line I set the several sums of payment

as you see in the margin: and having brought the several sums of payment into one total, I find their sum amounteth to 485 l 11 s 3 d, which I subtract from the sum first lent by A, and I find the remainder to be 79 l 5 s 7 d, and so much is still due to A.

When the learner hath good knowledge of what hath been already delivered he will with ease understand the following examples.

Subtraction of money.

	l.	s.	d.	l.	s.	d.	qrs.
Borrowed	374	10	3	700	10	11	1
Paid	97	15	11	9	3	11	2
Remains	276	14	4	691	6	11	3
Borrowed	1000	0	0	711	3	0	0
Paid	29	7	0	11	13	0	1
Remains due	970	13	0	699	9	11	3
Borrowed				3300	0	0	0
Paid at several payments				170	10	4	0
				360	13	10	1
				590	3	10	3
				74	4	11	3
Paid, in all				1195	13	0	3
Remains due				2104	6	11	1

Subtraction of troy weight.

	lb	oz	dr	gr
Bought	174	0	13	0
Sold	78	4	16	15
Remains	95	7	16	0

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	lb	oz	dr	gr
Bought	470	10	1	0
	60	0	0	0
	35	10	18	0
	16	7	9	8
Sold at several times	48	4	0	0
	61	11	19	23
	23	0	0	0
Sold in all	245	10	7	7
Remains unsold	224	11	13	17

Subtraction of apothecaries weight.

	lb	oz	dr	sc	gr	lb	oz	dr	sc	gr
Bought	12	4	3	0	0	20	0	1	0	7
Sold	8	5	1	1	15	10	0	1	2	12
Remains	3	11	1	4	5	9	11	7	0	15

Subtraction of avoirdupois weight.

	C	qrs	lb	T	C	qrs	lb	oz	dr
Bought	35	0	15	5	7	1	10	10	5
Sold	16	2	20	3	17	1	16	9	13
Remains	18	1	23	1	9	3	22	0	8

Subtraction of liquid measure.

	Tuns	hhds	gall	Tuns	hhds	gall	piats
Bought	40	1	30	60	3	42	4
Sold	26	1	40	15	0	46	6
Rem.	23	3	53	44	2	58	6

Subtraction of dry measure.

	Chal	qrs	bush	pecs	Chal	qrs	bush	pecs
Bt.	100	0	0	0	73	2	3	2
Sd.	54	1	4	3	46	2	3	3
Rem.	45	2	3	1	26	2	7	3

Subtraction of long measure.

	Yards	qrs	nails	Yards	qrs	nails
Bt.	160	0	0	344	0	1
Sold	95	1	2	177	0	3
Rem.	64	2	2	166	3	2

Subtraction of land measure.

	Acres	roods	perch	Acres	roods	perch
Bt.	140	2	13	600	0	0
Sold	70	3	12	54	0	16
Remains	69	3	2	545	3	24

Proof of subtraction.

Sums in this rule are easily proved, by adding their remainders to their lesser numbers; which (if right) will make the greater.

MULTIPLICATION.

Multiplication may be accounted the most serviceable rule in arithmetic; it performeth the work of many additions in the most compendious manner, brings numbers of great denominations into small, as pounds into shillings, pence, or farthings; tuns into hundreds, quarters, pounds, or ounces, &c. and by knowing the value of one thing, we find the value of many.

In multiplication observe these three terms, multiplicand, multiplier, product.

1. The multiplicand (generally the greater of the two numbers) is the number to be multiplied.

2. The multiplier (generally the lesser of the two numbers) is the number to be multiplied with.

3. The product, is the result of the work, or the answer to the question. But before any thing can be done

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to the purpose, it is necessary to learn the following table perfect by heart,

The multiplication Table.

3 times	$\left\{ \begin{array}{l} 3 \ 9 \\ 4 \ 12 \\ 5 \ 15 \\ 6 \ 18 \\ 7 \ 21 \\ 8 \ 24 \\ 9 \ 27 \end{array} \right.$	7 times	$\left\{ \begin{array}{l} 7 \ 49 \\ 8 \ 56 \\ 9 \ 63 \end{array} \right.$
4 times	$\left\{ \begin{array}{l} 4 \ 16 \\ 5 \ 20 \\ 6 \ 24 \\ 7 \ 28 \\ 8 \ 32 \\ 9 \ 36 \end{array} \right.$	8 times	$\left\{ \begin{array}{l} 8 \ 64 \\ 9 \ 72 \end{array} \right.$
5 times	$\left\{ \begin{array}{l} 5 \ 25 \\ 6 \ 30 \\ 7 \ 35 \\ 8 \ 40 \\ 9 \ 45 \end{array} \right.$	9 times	$\left\{ \begin{array}{l} 9 \ 81 \end{array} \right.$
6 times	$\left\{ \begin{array}{l} 6 \ 36 \\ 7 \ 42 \\ 8 \ 48 \\ 9 \ 54 \end{array} \right.$	12 times	$\left\{ \begin{array}{l} 2 \ 24 \\ 3 \ 36 \\ 4 \ 48 \\ 5 \ 60 \\ 6 \ 72 \\ 7 \ 84 \\ 8 \ 96 \\ 9 \ 108 \\ 10 \ 120 \\ 11 \ 132 \\ 12 \ 144 \end{array} \right.$

What is the amount of 3 times 654?

Answer, If you set the number 654, 3 times down on paper, one over another, the total will be 1962.

But such questions are done by this rule of multiplication much readier, for being set down thus:

654 Multiplicand
3 Multiplier

Now to know how much 3 times 654 is, begin thus, saying, 3 times 4 is 12, the figure 2 of 12, set below

the line, and bear the 10 of the 12 in mind, as 1; next, 3 times 5 is 15, and the 1 bore in mind, makes 16, so I set 6 below the line, and bear the ten in mind as one; next, I say, 3 times 6 is 18 and 1 bore in mind makes 19, which I set down, and the work will stand as in the margin.

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How many is 3 times 472? Set the figures down as in the margin; then say 3 times 2 is 6, which place under the 2 in the multiplicand; then 3 time 7 is 21: set down 1 under 7, and carry 2, for 2 tens, as in addition of one denomination; then 3 times 4 is 12, and 2 is 14, which I set down, and the product is 1416, that is 3 times 472 makes so much; and may be proved by addition, by setting down 472 three times in additional order, and casting it up, which makes the assertion good in the second definition, that this rule compendiously performs the office of addition. Likewise the foregoing examples agree with the first definition; for as 3 times 472 makes 1416 so doth 472 times 3 makes the same number.

Examples. Again, How many makes 742 multiplied by 4?

742 Multiplicand	} Here I say, 4 times 2 is 8, and 4 times 4 is 16; 6 and carry 1; and 4 times 7 is 28, and 2 is 29, which set down; so the whole product is 2968, as per example.
4 Multiplier	
2968 Product	

More examples of one figure in the multiplier, are these, viz.

Multiplicand	7420	4444	7468	90704	56789
	5	6	7	8	9
Product	37100	26664	52276	725632	511101

In compound multiplication.

When the multiplier consists of more figures than one, you must begin with that figure which is in the place of

units of the multiplier, and go through the whole multiplicand, by multiplying each figure of it first by that unit figure, and then by the next, to wit, by the figure in the place of tens in the multiplier, then with the third, &c, to the last; always remembering to place the first figure of every product or line (for you will ever have as many as you have significant figures in the multiplier). I say remember to place the figure of every line exactly and perpendicularly under the figure you multiply by, and then add the several lines or products together, which so collected, gives the total product required, as in the examples following, viz.

Example.

How many is, or are, 23 times 7426? First, 7426
begin with the unit figure 3 in the multiplier, 23
saying, 3 times 6 is 18, 8 (which I set directly
under 3, by which I multiply) and carry 1, 22278
then 3 times 2 is 6, and 1 is 7, then 3 times 14852
4 is 12, 2 and carry 1, then 3 times 7 is 21
and 1 is 22. And so I have done with the 170798
first figure of the multiplier, viz. 3. Then I
go to the next, that is 2, and say, twice 6 is 12, 2 and
carry 1 (which 2 is placed in a direct line under the
multiplying figure) then twice 2 is 4 and 1 is 5, then
twice 4 is 8, and lastly twice 7 is 14, which I set down,
and I add the two products together, saying, 8 is 8, &c.
and the total is the right and proper product or result of
the multiplication, viz. 10798.

527535

15728

4220280

1055070

3692745

2637675

526535

8297070480

275827

19725

1379135

551654

1930789

2482443

275827

5440687575

When cyphers are intermixt with figures in the multiplier then multiply by the figures as above; and when you come to a cypher in the multiplier, then set down another cypher exactly and perpendicularly under it; then begin the multiplicand again with the next figure to the cypher in the multiplier, and go through it in the same line, placing the first figure of that product next to the cypher towards the left hand, but then heed must be taken, that the next figure or cypher of the next line must be set down one degree farther towards the left hand, and not immediately under the last figure set down next to the cypher: as in the following examples may be fully understood.

24393	7864371	327586
402	23604	6030
87486	31457484	9827580
975720	471862260	39655160
9805986	23593113	4975343580
	15728742	
	185630613084	

When you have a cypher or cyphers in the multiplier, at the beginning towards the right hand; then set it or them backwards from the place of units towards the right hand, and when you have multiplied by the figure or figures, annex the cypher or cyphers,

As in these examples:

4762	47962	4532
70	400	2600
333340	19184800	27792
		9264
		12043200

If you have cyphers in the units place, &c. both in the multiplicand and multiplier, then neglect the cy-

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phers in both, and multiply by the figures, and annex as many cyphers to the total product as is the sum of the cyphers, both in multiplicand and multiplier.

As in these examples:

42600	42300	376400
220	12000	2400
852	846	15056
852	423	7528
9372000	507600000	903360000

When you are to multiply by 10, 100, 1000, or 10000, it is only adding or annexing so many cyphers to the multiplicand, as is in the multiplier, that is, either 1, 2, 3, or 4 cyphers, and the work is done. Example, Suppose I am to multiply 375 by the numbers above, if I multiply it by 10, then I join 0 to 375, and then it makes, or the product is, 3750: if by 100, then I annex 00, and then it makes 37500: if by 1000, I put to it 000, and then it produces 375000: and lastly, if by 10000, I then add 0000, and then it makes 3750000, &c. and thus may any number be multiplied, when the multiplier consists of an unit with any number of cyphers.

Suppose you want to know how many half-crowns there are in 246l. you know that 8 half-crowns make a pound, wherefore set them down thus:

246l.

Multipled by 8 the half crowns in a pound.

Answer 1968 the half-crowns in all.

Again, In 1968 half-crowns how many pence?
Multiply by 30 the pence in half-a-crown.

Answer 59040 pence in 1968 half-crowns.

And this serves to make out, that great denominations are brought into smaller by this rule.

Admit you wanted to know the contents of a large table 34 feet long, and 4 feet wide.

Multiply 34 the length
By 4 the breadth, and the

Answer will be 136 square feet for the true contents of such a table.

Multiplication of money.

Multiplication of money (what most would learn above every thing) hath great affinity with addition of money, the same method being taken in carrying one denomination to the next, viz. from farthings to pence, from pence to shillings, and from shillings to pounds. And as in addition (and other multiplications) you begin at the right hand, and proceed towards the left; so here you begin at the least denomination, which is also at the right hand.

This method of accounting is the most apt and expeditious of all others, for smaller quantities; and therefore extremely necessary in making bills of parcels, &c. And is beyond all contradiction, as sure and certain as any way whatsoever.

The general rule

Is always to multiply the price by the quantity.

The first step is, for quantities from 2 to 12, and this is done by one multiplier, as in the following example:

Example 1. What must I give for 6 pieces of cloth, if one cost 7*l.* 12*s.* 6*d.*?

7. s. d.

7. 12. 6

Multiply the price by

And the product is the answer, viz. 45 15 6

Here I say 6 times 6 is 36 pence, which is just 3s. I set down 0 in the place of pence, and carry 3s to the place of shillings, exactly the same as in-addition of money; then 6 times 12 is 72, and 3 is 75s. or 3l. 15s. wherefore I set down 15 in the place of shillings, and carry 3 to the pounds; then 6 times 7 is 42 and 3 is 45l. So the whole amount of the cloth, at 7l 12s 6d. per piece, is 45l. 15s. as in the work, and very concise.

Questions proper for this Rule.

Question 1. What is the contents of a square piece of ground, whose length is 28 perches, and breadth 13 perches?

Answer, 364 square perches: for multiplying 28 the length by 13 the breadth, the product is so much.

Question 2. There is a square battle, whose flank is 47 men, and the files 19 deep; what number of men doth that battle contain? *Facit* 893: for multiplying 47 by 19, the product is 893:

Question 3. If any one thing cost 4 shillings, what shall 9 such things cost? Answer, 36 shillings: for multiply 4 by 9, the product is 36.

Question 4. If a piece of money or merchandize be worth or cost 17 shillings, what shall 19 such pieces of money or merchandize cost? *Facit* 323 shillings, which is equal to 16l 3s.

Question 5. If a soldier or servant get or spend 14s. per month, what is the wages or charges of 49 soldiers or servants for the same time? Multiply 49 by 14, the product is 686s, or 34l 6s for the answer.

Question 6. If in a day there are 24 hours, how many hours are there in a year, accounting 365 days to constitute the year? *Facit* 8760 hours: to which if you add the 6 hours over and above 365 days, as there is in a year, then it will be 8766 hours. Now, if you multiply this 8766 by 60 you have the number of minutes in a year.

Division of whole numbers.

1. **D**ivision is the separating or parting of any number or quantity given, into any parts assigned; or to find how often one number is contained in another; or from any two numbers given, to find a third, that shall consist of so many units, as the one of those two give numbers is comprehended or contained in the other.

2. Division hath three parts or numbers remarkable, viz. first, the dividend; secondly, the divisor; thirdly, the quotient. The dividend is the number given to be parted or divided. The divisor is the number given by which the dividend is divided; or it is the number which sheweth how many parts the dividend is to be divided into. And the quotient is the number produced by the division of the two given numbers, the one by the other.

So 12 being given to be divided by 3, or into three equal parts, the quotient will be 4, for three is contained in 12 four times; where 12 is the dividend, and 3 is the divisor, and 4 is the quotient.

3. In division set down your dividend, and draw a crooked line at each end of it; and before the line at the left hand place the divisor, and behind that on the right hand place the figures of the quotient, as in the margin; where it is required to $3) 12 (4$ divide 12 by 3. First, I set down 12 the dividend, and on each side of it do I draw a crooked line, and before that on the left hand do I place 3 the divisor. Then do I seek how often 3 is contained in 12; and because I find it 4 times, I put 4 behind the crooked line on the right hand of the dividend, denoting the quotient.

4. But if when the divisor is a single figure, and the dividend consisteth of two or more places: then, having placed them for the work, as is before directed, put a point under the first figure on the left hand of the dividend, provided it be bigger than, or equal to the divisor; but if it be less than the divisor, then put a point under the second figure from the left hand of the dividend: which figures, as far as the point goeth from the left

Observe this general rule in all kinds of division.

Then because 6 the divisor is more than 2 the first figure of the dividend, I put a point under 1 the second figure, which makes 21 for the dividual. Then do I ask how often 6 the divisor is contained in 21, and because I cannot have it more than 3 times, I put 3 in the quotient, and thereby do I multiply the divisor (6) and the product is 18, which I set in order under the dividual, and subtract it there-

$$\begin{array}{r} 6 \overline{) 2184} 3 \\ 18 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 6)2184(3 \\ 18 \\ \hline 3 \end{array}$$

from, and the remainder (3) I place in order under the line, as you see in the margin.

Then do I make a point under the next figure of the dividend, being 0, and draw it down, annexing it to the remainder, 3; so I have 38 for a new dividual. Then do I seek how often 6 is contained in 38; and because I cannot have it more than 6 times, I put 6 in the quotient; and thereby do I multiply the divisor (6) and the product (36) I put under the dividual (38), and subtract it therefrom, and the remainder (2) I put under the line, as you see in the margin.

$$\begin{array}{r} 6) 2184 (36 \\ \dots \\ 18 \\ \hline 38 \\ 36 \\ \hline 2 \end{array}$$

Then do I put a point under the next (and last) figure of the dividend, (being 4), and draw it down to the remainder (4); and putting it on the right hand thereof, it maketh 24 for a new dividual. Then I seek how often 6 is contained in 24: and the answer is 4, which I put in the quotient, and then multiply the divisor (6) thereby, and the product (24) I put under the dividual (24); and subtract it therefrom, and the remainder is 0. And thus the work is finished; and I find the quotient to be 364; that is, 6 is contained in 2184 just 364 times, or 2184 being divided into 6 equal parts, 364 is one of those parts.

$$\begin{array}{r} 6) 2184 (364 \\ \dots \\ 18 \\ \hline 38 \\ 36 \\ \hline 24 \\ 24 \\ \hline (0) \end{array}$$

Again, if it were required to divide 2646 by 7, or into 7 equal parts, the quotient will be found to be 378; as appeareth by the operation on the margin.

$$\begin{array}{r} 7) 2646 (378 \\ \dots \\ 21 \\ \hline 54 \\ 49 \\ \hline 56 \\ 56 \\ \hline (0) \end{array}$$

So if it were required to divide 946 by 8, the quotient will be found to be 118, and 2 remaining after division is ended. The work appeareth on the margin.

$$\begin{array}{r} 8 \overline{) 946} \quad (118) \\ \underline{8} \\ 14 \\ \underline{8} \\ 66 \\ \underline{64} \\ 2 \end{array}$$

Many times the dividend cannot be exactly divided by the divisor, but something will remain; as in the last example, where 946 was given to be divided by 8, the quotient was 118, and there remaineth 2 after the division is ended. Now what is to be done in this case with the remainder, the learner shall be taught when we come to treat of the reducing (or reduction) of fractions.

And here note, that if, after your division is ended, any thing do remain, it must be less than your divisor, for otherwise your work is not rightly performed.

Other examples are as follow.

$$8 \overline{) 73464} \quad (9183)$$

$$\begin{array}{r} 72 \\ \underline{8} \\ 14 \\ \underline{8} \\ 66 \\ \underline{64} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

$$9 \overline{) 13758} \quad (1628)$$

$$\begin{array}{r} 9 \\ \underline{9} \\ 47 \\ \underline{45} \\ 25 \\ \underline{18} \\ 78 \\ \underline{72} \\ 6 \end{array}$$

5. But if the divisor consisteth of more places than one, then chuse so many figures from the left side of the dividend for a dividual, as there are figures in the divisor, and put a point under the farthest figure of that dividual to the right hand, and seek how often the first figure on the left side of the divisor is contain'd in the first figure on the left side of the dividual, and place the answer in the quotient, and thereby multiply your divisor, placing your product under your dividual, and subtract it therefrom, placing the remainder below the line. Then put a point under the next figure in the dividend, and draw it down to the said remainder and annex it on the right side thereof, which makes a new dividual; and proceed as before, till the work is finished.

And if it so happen, that, after you have chosen your first dividual as is before directed, you find it to be less than the divisor; then put a point under the figure more near to the right hand, and seek how often the first figure on the left side of the divisor is contained in the two first figures on the left side of the dividual, and place the answer in the quotient, by which multiply the divisor, and place the product thereof in order under the dividual, and subtract it therefrom, and then proceed as before.

Always remembering, that in all cases of division, if, after you have multiplied your divisor by the figure first placed in the quotient, the product be greater than the dividual, then you must cancel that figure in the quotient, and, instead thereof, put a figure less by an unit, (or one) and multiply the divisor thereby: and if still the product be greater than the dividual, make the figure in the quotient less by an unit. And thus do, until your product be less than the dividual, or at the most equal thereto, and then make subtraction, &c.

So, if you would divide 9464 by 24, the quotient will be found to be 394. I first put down the given number, as is before directed in the third rule. Now, because my divisor consisteth of two figures, I therefore put a point under my second figure from the left hand of my dividend, which is 4; wherefore I seek how often 2 (the first fi-

$$\begin{array}{r}
 3 \\
 24 \overline{) 9464} \\
 \underline{72} 4 \\
 22
 \end{array}$$

figure on the left side of the divisor is contain'd in 9 (the like first in the dividend) the answer is 4; which I put in the quotient, and thereby multiply all the divisor, and find the product to be 96, which is greater than the dividend; wherefore I cancel the 4 in the quotient, and, instead thereof, I put 3 (an unit less) and by it multiply the divisor 24, and the product is 72; which I subtract from 94 the dividend, and the remainder is 22. Then do I make a point under the next figure 6 in the dividend, and draw it down, and place it on the right side of the remainder 22, and it makes 226 for a new dividend. Now, because the dividend 226 consisteth of a figure more than the divisor, therefore I seek how often 2 (the first figure of the divisor) is contained in 22, the two first of the dividend: I say 9 times: wherefore I put 9 in the quotient, and thereby multiply the divisor 24; the product (216) I place under the dividend 226, and subtract from it, and there remaineth 10.

$$\begin{array}{r}
 24) 9464 \quad (39 \\
 \underline{} \\
 72 \\
 \underline{} \\
 226 - \\
 \underline{216} \\
 10
 \end{array}$$

Then I go on, and make a point under the next and last figure (4) in the dividend, and draw it down to the remainder 10, and it makes 104 for a new dividend: which is also a figure more than the divisor: and therefore I seek how often 2 is contained in 10: I answer 5 times.

But multiplying my divisor by 5, the product is 120; which is greater than the dividend: and therefore I make it but 4: and by it multiply the divisor, and the product is 96, which being placed under, and subtracted from the dividend, there remaineth 8. And thus the whole work of division is finished; and I find, that 9464 being divided by 24, or into 24 equal parts, is found to be 394, as was said before, and the remainder is 8; as you see in the work on the margin.

$$\begin{array}{r}
 24) 9464 \quad (394 \\
 \underline{} \\
 72 \\
 \underline{} \\
 226 \\
 \underline{216} \\
 104 \\
 \underline{96} \\
 (8)
 \end{array}$$

Another example may be this. Let there be required the quotient of 1183653 divided by 385. First I dispose of the numbers in order to their dividing; and be-

cause 118; the three first figures of the dividend, is less than the divisor 385, I therefore make a point under the fourth figure which is 3, and see how often 3 (the first figure of the divisor) is contained in 11: the an-

385) 1183653 (3

1155

28

swer is 3, which I put in the quotient, and thereby multiply the divisor 385, and the product is 1155, which I subtract from the dividend 1183, and there remains 28.

Then, as before, draw down the next figure, which is 6, and place it before the remainder 28: so have I 286 for a new dividend: and because it

hath no more figures than the divi-

385) 1183653 (30

for, I see how often 3 (the first fi-

1155

gure in the divisor) is contained in

2 (the first figure of the dividend)

286

and the answer is 0; for a greater

number cannot be contained in a

lesser; wherefore I put 0 in the quotient: and thereby

(according to the 5th rule) I should multiply my divi-

for; but if I do, the product will be 0; and 0 subtract-

ed from the dividend 286, the remainder is the same.

Wherefore I draw down the next

figure (5) from the dividend, and

385) 1183653 (307

put it before the said remainder

286: so have I 2865 for a new

1155

dividend; and because it consist-

eth of four places, viz. a place

2865

more than the divisor, I seek how

2695

often 3 (the first figure of the di-

170

visor) is contained in 28 (the two

first of the dividend) and I say

there is 9 times three in 28; but multiplying the whole

divisor (385) thereby, I find the product to be 3465,

which is greater than the dividend 2865: wherefore

chuse 8, which is less by an unit than 9; and thereby

I multiply the divisor 285, and the product is 3080,

which is still greater than the said dividend: where-

fore I chuse another number yet an unit less, viz. 7,

and having multiplied my divisor thereby, the product

is 2695; which is less than the dividend 2865; where-

fore I put 7 in the quotient, and subtract 2695 from the

dividual 2865, and there remains 385)1183653(3074
170. Then I draw down the last figure (3) in the dividend, and place it before the said remainder 170, and it makes 1703 for a new dividual. Then (for the reason above said) I seek how often 3 is contained in 17: the answer is 5, but multiplying the divisor thereby, the product is 1925 and greater than the dividual, wherefore I say it will bear 4, an unit less, and by it I multiply the divisor 385, and the product is 1540, which is less than the dividual, and therefore I put 4 in the quotient, and subtract the said product from the dividual, and there remaineth 163. And thus the work is finished, and I find that 1183653 being divided by 385, or in 385 equal shares or parts, the quotient or one of those parts, is 3074, and besides there is 163 remaining.

$$\begin{array}{r}
 1155 \\
 \hline
 2865 \\
 2695 \\
 \hline
 1703 \\
 1540 \\
 \hline
 (163)
 \end{array}$$

And thus the learner being well versed in the method of the foregoing examples, may be sufficiently qualified for the division of any greater sum or number, into as many parts as he pleaseth, that is, he may understand the method of dividing by a divisor that consisteth of 4, 5, or 6, or any greater number of places, the method being the same with the foregoing examples in every respect.

Other examples in division.

$$27986)835684790(29860 \quad 196374)473986018(2413$$

$$\begin{array}{r}
 55972 \\
 \hline
 275964 \\
 251874 \\
 \hline
 240907 \\
 223888 \\
 \hline
 170199 \\
 167916 \\
 \hline
 \text{Remains } 22830
 \end{array}$$

$$\begin{array}{r}
 392748 \\
 \hline
 812380 \\
 785496 \\
 \hline
 268841 \\
 196374 \\
 \hline
 724678 \\
 589122 \\
 \hline
 \text{Remains } 135556
 \end{array}$$

So if you divide 47386473 by 58736, you will find the quotient to be 806, and 45257 will remain after the work is ended.

In like manner, if you would divide 3846739204 by 483064, the quotient will be 7963, and the remainder after division will be 100572.

When the divisor is 3, 4, 5, 6, or more figures, there is a sure and easy way of performing the work truly, by making a table of the divisor, which may be done by addition, or multiplying the divisor by 2, 3, 4, &c.

Admit you are to divide 987654321 by 123456.

$$\begin{array}{r} 123456 \overline{) 987654321} \quad (8000 \\ 987648 \dots \end{array}$$

6321

Here having noted the number of figures in the divisor, which here is six, I make a point under the seventh figure, or place of the dividend, &c.

$$1 \quad 123456$$

$$2 \quad 246912$$

$$3 \quad 370368$$

$$4 \quad 493824$$

$$5 \quad 617280$$

$$6 \quad 740736$$

$$7 \quad 864192$$

$$8 \quad 987648$$

$$9 \quad 1111104$$

This table is made by doubling the first line, which is 246912, which added to the first or uppermost line, gives the third line 370368, which also added to the first line makes 493824 for the fourth line or product, and so of the rest, still remembering to add the subsequent line, till you come to the last line of 9 times, which is 1111104. The truth of which may be proved by multiplying the first or uppermost line by 2, 3, 4, 5, &c. and if you commit an error by addition it may be found out, or corrected by multiplication.

The use of the said table.

When you have pointed out your number of places in the dividend, cast your eye on the table, and at the first view you may know how many times you can take, as in this example, 7 times is too little, and 9 times too much, wherefore I set down 8 in the quotient, and then multiply and subtract, and the remainder is 6, to which I bring down 3, and put 0 in the quotient, then to the 63 I bring down 2, and place another 0 in the quotient, then to 632 I bring down 1 the last figure in the dividend, but still it will not bear any time or times, wherefore I put another 0 in the quotient, and so the work is done, and the quotient is 8000, and the remainder 6321. as in the work.

Abbreviations.

(1st.) If there are any cyphers on the right hand of your divisor, you may cut off so many cyphers, or figures, on the right hand of your dividend, but remember to bring them down (if figures) to the remainder.

Example.

$$21100)8645129(411$$

84

24

21

35

21

1429

(2dly.) By the foregoing rule you may observe, that to divide by 10, 100, 1000, &c. is only to cut so many figures from the right hand of the dividend, as there are cyphers in the divisor.

Example.

$$10000)436821735)$$

So the quotient is 43682, the remainder 735.

(3dly.) When your divisor is 12, or consists only of one single figure, or can be reduced to one by cutting

off cyphers from its right hand, the work may be easily performed in one line, thus :

Rule.

Drawing a line under the dividend, set down under its first figure, how often the divisor is contained in it : what remains imagine placed before the next figure, and, considering how often your divisor is contained in the sum it makes, set down the number underneath as before, and so proceed through all the figures, set down what remains at last, in the place where your quotient used to stand.

Examples.

$$\begin{array}{r} 4 \overline{)93645(1} \\ \underline{23411} \end{array}$$

$$\begin{array}{r} 12 \overline{)83675(11} \\ \underline{6972} \end{array}$$

$$\begin{array}{r} 7100 \overline{)5635115} \\ \underline{805} \end{array}$$

If you are to divide several numbers by one common divisor (as in the calculating of tables, &c.) that you may know exactly at once how often your divisor will go, in some convenient corner make a table of your divisor, by multiplying it severally by all the nine digits, thus, suppose 562 your divisor :

562	1
1124	2
1686	3
2248	4
2810	5
3372	6
3934	7
4496	8
5058	9

Proofs of division.

(1st.) Multiplication and division mutually prove each other : for as if you divide the product of a multiplication by the multiplier, the quotient will be the multiplicand : so if you multiply the quotient of a division by the divisor (taking in the remainder) the product will be the dividend.

(2dly.) Another proof of division is, by adding together those lines in the following example, marked with asterisks (being the particular products of the divisor, multiplied severally by each figure in the quotient, together with the remainder of the division) the total of which, if right, will be the dividend.

(3dly.) Division may also be proved as multiplication, by a cross, thus; casting out the nines from the divisor, and quotient, place the remainders on its right and left sides, then multiplying the two figures so placed together and casting the nines from the product, and what's left to the remainder of the division, and still casting out the nines, let the overplus be placed at the top; then also casting the nines from the dividend, set down the figure remaining at the bottom, which if it agrees with that at the top, the work may be supposed right. See each proof in the following

Example.

	736)863256(	1172
	736*	736
	1272	7032
	736*	3516
		8204
	5365	
	5152*	862592
		664 Remainder
	2136	
	1472*	863256 1st Proof.
	664*	

863256 2d Proof.

REDUCTION.

Reduction is that which brings together two or more numbers of different denominations into one denomination; or it serveth to change or alter numbers, money, weight, measure, or time from one denomination to another; and likewise to abridge fractions to the lowest terms; all which it doth so precisely, that

the first proportion remaineth without the least jot of error or wrong committed : so that it belongeth as well to fractions as integers ; of which in its proper place. Reduction is generally performed either by multiplication or division. From whence we may gather, That,

2. Reduction is either descending or ascending.

3. Reduction descending is, when it is required to reduce a sum or number of a greater denomination into a lesser, which number, when it is so reduced, shall be equal in value to the number first given in the greater denomination ; as if it were required to know how many shillings, pence, and farthings, are equal in value to an hundred pounds ? or, how many ounces are contained in 45 hundred weight ? or how many days, hours, or minutes, there are in 240 years ? &c. And this kind of reduction is generally performed by multiplication.

4. Reduction ascending is, when it is required to reduce or bring a sum or number of a smaller denomination into a greater, which shall be equivalent to the given number ; as suppose it were required to find how many pence, shillings or pounds, are equal in value to 43785 farthings ? or how many hundreds are equal to (or in) 3748 pounds, &c. And this kind of reduction is always performed by division.

5. When any sum or number is given to be reduced into another denomination, you are to consider whether it ought to be resolved by the rule descending or ascending, viz. by multiplication, or division. If it be to be performed by multiplication, consider how many parts of the denomination into which you would reduce it are contained in an unit or integer of the given number, and multiply the said given number thereby, and the product thereof will be the answer to the question. As, if the question were, In 38 pounds how many shillings, here consider, that in one pound are 20 shillings, and that the number of shillings in 38 pounds, will be 20 times 38; wherefore I multiply 38. by 20, and the product is 760, and so many shillings are contained in 38 l. as in the margin.

38
20
—
760

But when there is a denomination or denominations between the number given and the number required,

you may, if you please, reduce it to the next inferior denomination, and then into the next lower than that, &c. until you have brought it into the denomination required. As for example; let it be demanded, In 132 pounds how many farthings? First, I multiply 132 (the number of pounds given) by 20 to bring it into shillings, and it makes 2640 shillings. Then do I multiply the shillings 2640 by 12 to bring them into pence, and it produceth 31680, and so many pence are contained in 2640 shillings or 132 pounds. Then do I multiply the pence, viz. 31680 by 4, to bring them into farthings, (because 4 farthings is a penny) and I find the product thereof to be 126710, and so many farthings are equal in value to 132 pounds. The work is manifest in the margin.

$$\begin{array}{r}
 132 \text{ pounds} \\
 \underline{20} \\
 2640 \text{ shillings} \\
 \underline{12} \\
 5280 \\
 2640 \\
 \hline
 31680 \text{ pence} \\
 \underline{4} \\
 126710 \text{ farthings}
 \end{array}$$

6. And if the number propounded to be reduced is to be divided, or wrought by the rule ascending, consider how many of the given numbers are equal to an unit or integer in that denomination to which you would reduce your given number, and make that your divisor, and the given number your dividend; and the quotient thence arising will be the number sought or required. As for example; let it be required to reduce 2640 shillings into pounds. Here I consider that 20 shillings are equal to one pound; wherefore I divide 2640, the given number, by 20, and the quotient is 132, and so many pounds; are contained in 2640 shillings. In reduction descending and ascending, the learner is advised to take particular notice of the tables delivered in the former part of this book, where he may be informed what multipliers or divisors to make use of in the reducing of any number to any o-

$$\begin{array}{r}
 1. \\
 20 \overline{) 2640} (132 \\
 \underline{\dots} \\
 2 \\
 \underline{} \\
 6 \\
 \underline{6} \\
 4 \\
 \underline{4} \\
 (0)
 \end{array}$$

ther denomination whatsoever, especially English monies, weights, measures, time, and motion. But in this place it is not convenient to meddle with foreign coins, weights, or measures.

But if in reduction ascending it happen that there is a denomination, or denominations between the number given and the number required, then you may reduce your number given into the next superior denomination, and when it is so reduced, bring it into the next above that, and so on, until you have brought it into the denomination required. As for example;

Let it be demanded, In 126720 farthings how many pounds? First I divide my given number, being farthings, by 4, to bring them into pence, because 4 farthings make one penny; and there are 31680 pence. Then I divide 31680 pence by 12, and the quotient giveth 2640 shillings. And then I divide 2640 shillings by 20, and the quotient giveth 132^l. which are equal in value to 126720 farthings. See the work.

12)	210)	l.
4) 126720	(31680	(2640
.....		
10	24	2
-----	-----	-----
6	76	6
4	72	6
-----	-----	-----
27	48	4
24	48	4
-----	-----	-----
32	(0)	(0)
42		

(0)		

7. When the number given to be reduced, consisteth of divers denominations, as pounds, shillings, pence, and farthings, or of hundreds, quarters, pounds, and ounces, &c. then you are to reduce the highest, or greatest denomination into the next inferior, and add thereunto the number standing in that denomination, which your greatest or highest number is reduced to. Then reduce

that sum into the next inferior denomination, adding thereto the number standing in that denomination. Do so until you have brought the number given into the denomination proposed. As, if it were required to reduce 48*l.* 13*s.* 10*d.* into pence: first I bring 48*l.* into shillings, by multiplying it by 20, and the product is 960 shillings; to which I add the 13 shillings, and they make 973. Then I multiply 973 by 12, to bring the shillings into pence, and they make 11676; to which I add the 10 pence, and they make 11686 pence for the answer. See the work done.

$ \begin{array}{r} \text{£. s. d.} \\ 48 \quad 13 \quad 10 \\ \hline 20 \\ \hline 960 \text{ shillings} \\ \text{Add } 13 \\ \hline \text{Sum } 973 \text{ shillings} \\ 12 \\ \hline 11676 \\ \text{Add } 10 \\ \hline 11686 \text{ pence} \end{array} $
--

Sum 11686 pence

8. If in reduction ascending, after division is ended, any thing remain, such remainder is of the same denomination with the dividend.

Example. In 4683 farthings, I demand how many pounds? View the following operation.

First, I divide the given number of farthings, viz. 4783, by 4, to bring them into pence, and the quotient is 1195 pence, and there remaineth 3 after the work of division is ended, which is 3 farthings.

$ \begin{array}{r} 4 \overline{) 4783} \\ \underline{4} \\ 7 \\ \underline{4} \\ 38 \text{ Rem. } 7 \text{ pence} \\ \underline{36} \\ 23 \text{ Facit } 4 \text{ } 19 \text{ } 7 \text{ } 3 \end{array} $	$ \begin{array}{r} 12 \\ 1195 \\ \underline{108} \\ 115 \\ \underline{108} \\ 7 \\ \underline{6} \\ 1 \end{array} $	$ \begin{array}{r} 20 \\ 99 \text{ (4 pounds)} \\ \underline{8} \\ 19 \text{ shillings} \\ \underline{18} \\ 1 \end{array} $
---	--	---

Again, I divide 1195 pence, the said quotient, by 12 to reduce 'em

3 farthings remains.

into shillings, and the quotient is 99 shillings, and there is a remainder of 7, which is 7 pence.

And then divide 99 shillings (the last quotient) by 20, to bring it into pounds, and the quotient is 4^l. and there remaineth 19 shillings; so that I conclude that in 4783 (the proposed number of farthings), there is 4^l 19s 7d 3qrs.

More examples in the reduction of coin.

Quest. In 438^l. how many shillings? Facit 8760 shillings; for multiplying 438 by 20, the product amounteth so much. See the work.

438 pounds
20

Facit 8760 shillings

Quest. In 467^l how many pence? First multiply the given number of pounds (467) by 20, to bring it into shillings; and it makes 9340 shillings, then multiply the shillings by 12, and it produceth 112080 pence, thus,

467 pounds
20

9340 shillings
12

1868

934

Facit 112080 pence

Or it may be resolved thus, viz. Multiply the given number of pounds (467) by (240) the number of pence in a pound, and the product is the same, viz. 112080 pence, as by the operation appeareth

467 pounds
240

1868

934

Facit 112080

Quest. In 5673 lb. how many farthings? First multiply the given number by 20, to bring it into shillings, and it produceth 113460 shillings, then multiply that product by 12, to bring it into pence, and it produceth 1361520 pence, then, lastly, multiply the pence by 4, and it produceth 5446080 farthings. See the operation

$$\begin{array}{r}
 5673 \text{ pounds} \\
 \times 20 \\
 \hline
 113460 \text{ shillings} \\
 \times 12 \\
 \hline
 1361520 \text{ pence} \\
 \times 4 \\
 \hline
 \text{Facit } 5446080 \text{ farthings}
 \end{array}$$

Or this question might have been thus resolved, viz. Multiply 5673 (the given number of pounds) by 960 (the number of farthings in a pound) and it produceth the same effect, as you see by the work.

$$\begin{array}{r}
 5673 \text{ pounds} \\
 \times 960 \\
 \hline
 34038 \\
 51057 \\
 \hline
 \text{Facit } 5446080
 \end{array}
 \qquad
 \begin{array}{r}
 20 \text{ shillings} \\
 12 \\
 \hline
 240 \text{ pence} \\
 4 \\
 \hline
 960
 \end{array}$$

Otherwise thus, First bring the given number 5673 lb. into shillings, and multiply the shillings by 48, the number of farthings in a shilling, and the same effect is thereby likewise produced, viz.

$$\begin{array}{r}
 5673 \text{ pounds} \\
 \times 20 \\
 \hline
 113460 \text{ shillings} \\
 \times 48 \\
 \hline
 90768 \\
 45384 \\
 \hline
 \text{Facit } 5446080 \text{ farthings}
 \end{array}
 \qquad
 \begin{array}{r}
 12 \text{ pence} \\
 4 \\
 \hline
 48 \text{ farthings}
 \end{array}$$

These various ways of operation are expressed to inform the judgment of the learner with the reason of the rule. More ways may be shewn, but these are sufficient even for the meanest capacities.

Quest. In 458l. 16s. 7d. 4 qrs. how many farthings? To resolve this question, consider the seventh rule, and work as you are there directed, and you will find the foresaid given numbers to amount to 440479 farthings, viz.

	l.	s.	d.	qrs.
	458	16	7	3
		20		
		9160		
Add		16	shillings	
		9176	shillings	
Sum		13		
		18352		
		9176		
		110112		
Add			7 pence	
Sum		110119	pence	
		4		
		440476		
Add			3 farthings	
Sum		440479	farthings	

This last question, or any other of this kind, viz. where the number given to be reduced consisteth of several denominations, may be much more concisely resolved this way, viz. When you multiply the pounds by 20, to bring them into shillings, to the product of the first figure add the figure standing in the place of units in the denomination of shillings; but because the first figure in the

	l.	s.	d.	qrs.
	458	19	7	3
		20		
		9176	shillings	
		12		
		18359		
		9176		
		110119		
		4		
Facit		440479	farthings	

multiplier is 0, I say, 0 times 6 is nothing, but 6 is 6, which I put down for the first figure in the product. Then because the multiplier is 0, I go no further with it, for if I should, the whole product would be 0; but proceed. And when I come to multiply by the second figure in the multiplier, to the product of it I add the figure standing in the place of tens in the denomination of shillings, which is 1; saying 2 times 8 is 16, and (the said figure) 17. Then I set down 7, and carry the unit to the product of the next figure, as has been directed before. So that now you may have the whole product and sum of shillings at one operation, which is the same as before. And when you multiply the shillings by 12, to bring them into pence, after the same manner, add to the product the number standing in the denomination of pence; and so when you multiply the pence by 4, to bring them into farthings, add to the product the number standing under the denomination of farthings. See the last question thus wrought on the margin of the preceeding page.

Reduction of troy weight.

We now come to give the learner some examples in troy weight, wherein we shall be brief, having given so large a taste of reduction in the former examples of coin. And now the learner must be mindful of the table of troy weight delivered in addition.

Quest. In 482 lb. 7 oz. 13 pw. 21 gr. how many grains?

Multiply by 12, by 20, and by 24, taking in the figures standing in the several denominations, according to the directions, given formerly, and you will find the product to be 2780013 grains, which is the number required, or answer to the question. See the whole work as followeth.

lb. oz. pw. gr.

482 7 13 21

12

971

482

5791 ounces

20

115833 penny weight

24

463333

231668

Facit 2780013

Quest. In 2780013 grains, I demand how many lb. oz. pw. gr.?

This is but the foregoing question inverted, and is resolved by dividing by 24, by 20, and by 12, and the answer is 482 lb. 7 oz. 13 pw. 21 gr.

24)2780013 (115833 (5791 (482

24

10

48

38

15

99

34

14

96

140

18

31

120

18

24

200

3

Rem. 7 ounces.

192

2

81

Rem. 13 penny weight.

72

93

lb. oz. pw. gr.

72

Facit 482 7 13 21

Remains 21 grains.

Reduction of avoirdupois weight.

In reducing of avoirdupois weight, the learner must have recourse to the table of avoirdupois weight delivered before.

Quest. In 47 C. 1 qr. 20 lb. How many ounces? Multiply by 4, by 28, and by 16, and the last product will be the answer, viz, 84992 ounces.

$$\begin{array}{r}
 \text{C. qr. lb.} \\
 47-1-20 \\
 \underline{4} \\
 189 \\
 \underline{28} \\
 5312 \\
 \underline{380} \\
 5312 \\
 \underline{16} \\
 32872 \\
 \underline{5312} \\
 32872
 \end{array}$$

Facit 84992 oz.

Quest. In 84992 ounces, I demand how many C. qrs. lb. and oz.?

This is the foregoing question inverted, and will be resolved if you divide by 16, by 28, and by 4, and the answer is 47 C. 1 qr. 20 lb. equal to the given number in the foregoing question.

16)84992	28)	4)	C. qrs. lb. oz.
5312	(5312	(189	(47 1 20 0
80	28	16	
49	251	29	
48	224	28	
19	272	1 qr.	
16	252		
32	20 pounds		
32			
(0)			

Reduction of liquid measure.

Quest. In 45 tuns of wine, how many gallons? Multiply by 4 and 63, the product is 11340 gallons for the answer.

$$\begin{array}{r}
 45 \\
 \times 4 \\
 \hline
 180 \\
 \times 63 \\
 \hline
 54 \\
 108 \\
 \hline
 \end{array}$$

Facit 11340

Quest. In 34 rundlets of wine, each containing 18 gallons, I demand how many hogheads?

First, find how many gallons are in the 34 rundlets, which you may do if you multiply 34 by 18, the content of a rundlet, and the product is 612 gallons, which you may reduce into hogheads, if you divide them by 63, and the quote will be 9 hogheads, and 45 gallons. See the work.

$$\begin{array}{r}
 34 \\
 \times 18 \\
 \hline
 272 \\
 34 \\
 \hline
 612
 \end{array}$$

63)612(9 hhds

$$\begin{array}{r}
 567 \\
 \hline
 \end{array}$$

Rem. 45 gall.

Facit 9 hhds. 45 gall.

Quest. In 12 tuns, how many rundlets of 14 gallons per rundlet?

Reduce your tuns into gallons, and divide them by 14, the gallons in a rundlet, and the quotient, 216, is your answer. See the work.

$$\begin{array}{r}
 14 \\
 4 \\
 \hline
 48 \\
 63 \\
 \hline
 144 \\
 288 \\
 \hline
 14 \overline{) 3024} \text{ (216 rundlets.} \\
 \underline{28} \\
 22 \\
 \underline{14} \\
 84 \\
 \underline{84} \\
 (0)
 \end{array}$$

Facit 216 rundlets.

Reduction of long measure.

Quest. I demand how many furlongs, poles, inches, and barley-corns will reach from London to York, it being accounted 151 miles?

151 miles
8 furlongs in a mile

1208 furlongs
40 poles in a furlong

48320 poles
11 half yards in a pole

4832
4832

531520 half yards
18 inches in a half yard

425216
53152

9567360 inches
3 barley-corns in an inch

28702080 Answer.

Quest. The circumference of the earth (as all other circles are) is divided into 360 degrees, and each degree into 60 minutes, which upon the superficies of the earth, are equal to 60 miles; now I demand how many miles, furlongs, perches, yards, feet, and barley corns, will reach round the globe of the earth?

360 degrees

60 minutes or miles in a degree

21600 miles about the earth

8 furlongs in a mile

172800 furlongs about the earth

40 perches in a furlong

6912000 poles or perches about the earth

11 half yards in a perch

6912

6912

2) 76032000 half yards about the earth

(38016000 yards, viz. the half yards divid-

3 by 2

114048000 feet about the earth

12 inches in a foot

228096

114048

1368576000 inches about the earth

3 barley corns in an inch

Facit 4105728000 barley-corns

And so many will reach round the world, the whole being 21600 miles. So that if any person were to go round, and go 15 miles every day, he would go the whole circumference in 1440 days, which is 3 years 11 months and 15 days.

Reduction of time.

Quest. In 28 years, 24 weeks, 4 days, 16 hours, 30 minutes, how many minutes?

N 2

ARITHMETIC.

Years, weeks, days, hours, minutes.

28—24—4—16—30

52 weeks in a year.

60

142

1480 weeks

7

10364 days.

24

41462

20729

248752 hours.

60

14925150 minutes.

Note, That in resolving the last question after the method expressed, there are lost in every year 30 hours; for the year consisteth of 365 days and 6 hours; but by multiplying the year by 52 weeks, which is 364 days, you lose one day and six hours every year. Wherefore, to find an exact answer, bring the odd weeks, days and hours, into hours, and then multiply the year by the number of hours in a year, viz, 8766, and to the product add the hours contained in the odd time, and you have the exact time in hours; which bring into minutes as before.

	Days, hours.	Weeks, days, hours.
28	365—6	24—4—16
8766	24	7
172	1466	172
172	730	24
197		
228	8766 hours in a y. 694	
		345
249592 hours		
60		4144
1497550 min. in 28 years, and 4144 hours.		

So you see, that, according to the method first used to resolve this question, the hours contained in the given time, are 248752, but according to the last, best, or truest method, they are 249592, which exceeds the former by 840 hours.

But for most occasions it will be sufficient to multiply the given years by 365, and to the product add the days in the odd time, if there be any, and then there will be only a loss of 6 hours in every year, which may be supplied by taking a fourth part of the given years, and adding to the contained days, and you have your desire.

The Golden Rule, or Rule of Three Direct.

IS so called from its extraordinary usefulness, not only in arithmetical questions but in all parts of the mathematics.

It is also called the rule of three, because there are always three numbers given to find out a fourth: and it is properly called the rule of proportion, because the first number bears such proportion to the second, as the third does to the fourth.

The design of this rule is, to shew how to find a fourth proportional number, by having three given numbers, which is deducible from the sixteenth proposition of the sixth book of Euclid's elements.

The Rule is,

Multiply the second and third numbers together, and divide the product by the first number, and the quotient thence arising is the fourth number sought. Or,

Divide the second number by the first, and multiply the quotient by the third, and the product is the number required: for the fourth number contains the third so often as the second contains the first. And this is called direct proportion.

All questions in this rule of three consist of three numbers, whereof two are always of one kind or denomination. As in this example.

If I give 10s. for 5 yards, what shall I give for 15 yards at the same rate?

Now two of these are of the same kind, that is, the number 5 and 15, which are both yards, which place thus. The number concerning which the question is asked, must be in the third place.

Now in this question the 15 yards in the number, and the price of which the question requires the value, place it therefore in the third place.

Then seek out the other number of the same kind or denomination, which must be yards also, which in this question is 5; set this in the first place, and then the other number, that is 10s. will consequently claim the second place, and the answer to the question will be always of the same denomination with it, which here is shillings.

Now the question stated according to the foregoing rule stands thus,

If 5 yards cost 10s. at will 15 yards cost?

$$\begin{array}{r}
 15 \\
 \hline
 5 \overline{)150} (30s. \text{ Answer.} \\
 \underline{15} \\
 00
 \end{array}$$

Multiply the second number by the third, and divide the product by the first.

Note, That the three numbers are 5, 10, 15.

Proof of the last question.

What shall I pay for 5 yards, when 15 yards are sold for 30s.?

If 15 yards cost 30s. what will 5 yards cost?

$$\begin{array}{r}
 5 \\
 \hline
 15 \overline{)150} (10s. \text{ Answer.} \\
 \underline{15} \\
 00
 \end{array}$$

ARITHMETIC.

151

What is the interest of 75 pounds at the rate of 8% per cent. per annum?

The numbers will be stated thus,

L. P.	L. I.	L. P.
100	8	75

In this example there are two numbers that are principal money, and one that is interest, therefore the interest (according to the rule) must stand in the middle, or second place, the principal on which the interest dependeth, viz. 100/. (8 being the interest thereof) must stand in the first place towards the left hand, and the other principal on which the fourth number (which is the number sought for) dependeth, must possess the first place towards the right hand.

By these rules foregoing, you may with ease and certainty perform any operation in direct proportion, and for your further information take the examples following.

Example. If the interest of 100/. for one year be 8% what is the interest of 75/, for the same time?

L. P.	L. I.	L. P.
100	8	75

1100)6100(6/. Answer.

Example. If 32 rundlets of brandy cost 96/. what will 4 rundlets cost at that rate?

Run.	l.	Run.
32	96	4
	4	

32)384(12/. Answer.

64

o Remains

Example. If 12 bags of cotton wool cost 184*l*. what will 27 bags cost?

Bags	1.	Bags	
12	184	17	
	1288	1	s
	184	260	13
		4	Answer.

$$12 \overline{) 3128 (260 \text{ } l.$$

72

8 pounds remain

20 shillings multiply

$$12 \overline{) 160 (13 \text{ shillings.$$

40

4 shillings remain

12 pence multiply

$$12 \overline{) 48 (4 \text{ pence.$$

0 remains

Note, That in the last example, when any thing remains that is reducible to a lower denomination, after it is so reduced, it must be divided continually by the first number.

Case.] When any of the three given numbers happen to be of divers denominations,

Rule.] You may reduce them into the lowest denomination. And if your first number require to be reduced, your third must be reduced likewise into the same denomination as the first: for the first and third numbers before you begin your operation, must be always of one name or denomination.

Example. If 17 hogheads of sugar cost 320 l. 12 s. what will 5 of these hogheads be worth?

Hhds. l. s. hds.

17 320 12 5

20

6414 shillings } multiply
5 hds.

20) 32060 (18815 (94 5 10 2 1/2

150

8

146

0 remains

100

15 shillings remain } multiply
12 pence in a shill.

30

15

17)180(10 pence

10 pence remain } multiply
4 farthings 1 d.

17)40(2 farthings

6 farthings remain to be divided
by 17

Note, That when you have multiplied the second and third numbers together, and divided the product by the first, the quotient is of the same denomination as the second number is, after you have reduced it (as in the last example) into its lowest denomination given.

Example. If 4 C 1 qr 24 lb of sugar cost 14 l. what will 18 C cost?

154

ARITHMETIC.

C qr lb
4 1 24
4
42
45

l. C
14 18
18
18
18

500 lb of sugar

2016 lb of sugar } multiply
14 l. sterling

8064
2016
5100)282124 (56 8 11 2 ⁴⁰/₁₀₀

32

224 pounds remain } multiply
20 shillings in 1l.

5100)44180 (8 shillings

480 shillings remain } multiply
12 pence in 1s

960
480
5100)57160

7

260 pence remain } multiply
4 farthings 1 d.

5100)10140 (2 qrs

40 farthings remain to be divided
by 500.

Note further, That what farthings remain, to be divided by the common divisor (as in the last example) because you can reduce them into no lower denomination, you may place them over your divisor, as fractions of a farthing, which shall be explained when we come to treat of vulgar fractions, &c.

Case.] When the first number of the three given, is but an unit, the operation is performed by multiplication only.

Example. If I give 15 s. for a pound of thread, what will 250 lb. cost at that rate?

lb	s	d
1	15	250
		15
		1250
		250

3750 s. answer, or 187l. 10s.

Example. At 14 l. 10s. 6 d. per bag of hops, what cost 55 bags?

Bag	l	s	d	Bags
1	14	10	6	55
			20	
			290	shillings
			12	

3486 pence

55 the 3d numb.

} multiply

17430
17430

191730 pence ans. or 798l. 17s. 6d.

Case.] When the third number of the three given, or that towards the right hand, is an unit, such operation is performed by division only; if the number need no reducing.

Example. If 40 pieces of broad cloth cost 590l. what will one piece cost?

Pieces /. Piece
 40 590 1
 40(59)9(14½ l. or 14 l. 15 s. answer

 19

30 pounds remain

If one bushel of rye cost 3s. 6d. what will a last or 10 quarters cost after that rate?

First reduce the 3s 6d into pence, that is 42d and the 10 quarters into bushels, that is 80, and set the question thus:

If 1 bushel cost 42d. what will 80 cost?

80

 3360

The first number or place being 1, will neither multiply nor divide, then bring the 3360 into shillings by dividing by 12 as followeth.

12)3360(280 shillings

24

 96

96

 0

20)280(14l.

20

 80

80

 14l.

20

For the proof of this, and the like questions, reduce the answer into pence, to know whether your work be right, as appears in the work.

280

 12

 3360

If I paid 432l. for 525 quarters of malt, what is the price of 1 quarter after that rate?

Which being stated stands thus,

If 525 quarters cost 432l what will 1 quarter cost?

In this question you cannot multiply the second number by the third, because the third number [or place] is one.

Therefore to perform this question with ease, reduce 432l into farthings by reduction, which makes 414720 farthings to be divided, which divide by 525, the quarters of malt, and the quotient, the answer is 789 farthings; the remainder after the division is ended, are but the parts of a farthing.

Lastly, The 789 farthings being reduced, are 16 s. $5\frac{1}{4}$ d. Therefore, if 525, quarters of malt (or tods of wool or goods) be sold for 432l. one quarter will cost 16s. $5\frac{1}{4}$ d. after that rate. Or which is better, reduce the 432l. into shillings, and it gives 8640, which divide by 525, and the quotient is 16, and the remainder 240, which multiply by 12 the product is 2880, which divide by 525, the quotient is 5 pence, and the remainder 255; that multiply by 4, and the product 1020 divided as before, gives one farthing and $\frac{495}{25}$ parts of another farthing.

If a grocer bought $5\frac{3}{4}$ C. weight of nutmegs, which cost him 163l. 13s. 8d. how may he sell one pound weight without gain or loss?

Reduce the money into pence, it makes 39284d for the dividend, and $5\frac{3}{4}$ C. weight into pound weights by reduction, makes 644 pound weight for the divisor; then divide the 39284 by 644, and the quotient gives 61 pence, the price of one pound. viz. 5s 1d.

Note, That what sum of money you desire to gain, add it to the price, and work as above, to know what you get by every single pound.

Suppose the yearly rent of 20l. belonging to 7 landlords

Reduce the 20l. into farthings, and they are 19200, which divide by 7, the quotient gives 2742 $\frac{6}{7}$ farthings for each landlord, from which you may subtract the taxes.

By the same rule you may draw a comparison of debts; for if a man owe to several creditors, as suppose it comes to in all 35l. 16s. reduce it into farthings, and divide it by the number of pounds owing, &c.

Suppose a man leaveth 13l
to pay his debts, and he owes
one man 5l the second 6l and
the third 7l which makes 18l
what is each mans share?

	l	s	d	q
To the first	3	12	2	2
—Second	4	06	8	0
—Third	5	01	1	2
	13	00	0	0

If 28 qrs of barley cost 30l 10s 6d, tell me what
84 quarters come to at that rate?

28 qrs cost 30l 10s 6d, what will 84 qrs cost?

	20	12
Shillings	610	28)615384
	12	56
		2101831—6
	1226	55
	610	28 L 91—11—6
Price	7326	273
	84	252
	29304	218
	58608	196
Sum	615384	224
		224
		(0)

84 qrs comes to 91l 11s 6d

	20
	1831
	12
	3668
	1831
	21978

For a proof I reduce the }
91l 11s 6d into pence }

How many yards of cloth shall I buy for 21l 10s 1½d,
when 3½ are sold for 2l 14s 3d?

First, reduce the 2l 14s 3d into farthings, which
make 2604, for the first number; next, the 3 yards and

an half into quarters, which make 14 for the second number, and the 211 10s $1\frac{1}{2}$ and it makes 20646 farthings; then multiply that by 14, and the product is 289044, to be divided by 2604, and the quotient gives 111 quarters of yards, to divide by 4, (the quarters in a yard) and the quotient is 27 yards $\frac{3}{4}$, viz. 3 quarters, for answer.

Thus stated being reduced.

Farthings Quarters Farthings

2604

14

20646

14

If one pound of iron cost $3\frac{1}{2}$ l, what will

7C 3qrs 17lb cost?

4

31 qrs of an C

28 lbs in $\frac{1}{4}$ of an C

— take in 17 lb

255

63

Pounds 885 in 7 C 3 qrs 17 lb

14 farthings in $3\frac{1}{2}$ l

3540

885

4)12390 farthings answer

12)3097 $\frac{1}{4}$

210)2518 1

Answer L 12 18 $1\frac{1}{2}$

Note, That this example may serve for a rule to reduce hundreds, quarters, and pounds into pounds; but most tradesmen set the weights in short, thus, 7—3—17 instead of setting them as above 7C 3qrs 17 lb.

Besides this way of proof, of reducing the total to farthings again, is most necessary for young learners, in most of the questions in the rule of three.

The Indirect Rule of Three.

IN the indirect rule of three, the numbers are in reciprocal proportion, that is, the fourth number to be found, is to bear the same ratio to the second as the third does to the first, but in an inverted, order; that is, the greater the third term is in respect to the first, the less must the fourth be in respect to the second.

This rule differs in its operation, from the direct, in that, after the question is stated, and the numbers of the statings prepared (as in the direct rule) your first and second must be multiplied together, and your third number be your divisor. The quotient, as before, will be the answer.

EXAMPLES.

Ex. 1. What number of men must be employed to finish in 12 days, what 43 men would be 35 days about?

days	men	days
35	43	12
43		
105		
140		
12	1505	

Answer, 125 men

Ex. 2. How many yards of stuff 3 qrs wide, will hang a room which requires 420 yards of 5 qrs wide?

qrs	yds	qrs
5	420	3
3		
3	2100	

Answer 700

The reason of this operation will appear plain (after what has been said in the direct rule) by considering the last example. Now it is clear, that if of the stuff, being 5 quarters wide, there are 420 yards required, then were the stuff but 1 quarter wide, 5 times 420 yards, viz. 2100 yards must be allowed; consequently, if the stuff be 3 quarters wide, one third part of those yards will be sufficient; therefore 2100 divided by 3, will give the true answer required, viz. 700 yards.

To know whether a question belongs to the Direct or Indirect Rule of Three,

Observe, If the third number, being more than the first number requires more, or, being less, requires less, it is Direct; but if the third number, being more, requires less, or being less, requires more, it is indirect.

Or, without any regard to the distinction of Direct and Indirect; if more is required. let the lesser of the two extremes be the divisor, if less, the greater.

More questions in the Indirect Rule of Three.

If I lend A 136l. for 3 months, how long must I keep 42l. of his, to requite myself?

Answer, 9 months, 2 weeks, 6 days.

16 clerks in 32 days finish a piece of writing, in what time would 55 clerks accomplish the same?

Answer, 26 days, 9 hours, 9 minutes.

A garrison, consisting of 1539 men, being besieged, hath provision only for 12 days: but it being necessary they should hold out three weeks, how many men must be sent out?

Answer, 660 men.

The Double Rule of Three.

Questions in this rule have five numbers proposed, and are frequently answered by two statings, though they may be performed by one as shall be shewn hereafter.

EXAMPLES.

Ex. 1. The carriage of 32 hundred weight 56 miles comes to 12s. After the same rate, what must I pay to have 78 hundred weight carried 94 miles?

	C	s	C	
1st If	32	—	12	—
			78	—
			12	—
			s	d
			32)936	(29 3 facit
			64	
			296	
			288	
Miles	s	d	Miles	
Then, If 46	29	3	94	•• 8
	12			12
			351	
			4	
			1404	
			3159	
56)32994	(589			
280			12)598	(1
499			210)419	
448				
514				
504				
10				

Facit 2l. 9s. 1d.

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Note, The solution had been the same, if the miles had been made first and third numbers of the first stating; and the C weights the first and third numbers of the last.

Note also, this example may be done by one stating thus:

C	s	d
If 32	12	78
56 miles		94 miles

192	312
160	702
1792	7332
	12

1792	87684	49	1
	7168		

16304	29
16128	

176
12

1792	2112	1
	1792	

320

Ex. 2: How many men must be employed to reap 420 acres in 17 days, if there were required 37 men to reap 54 acres in 5 days?

ARITHMETIC.

Acres Men Acres
First, If 54 — 37 — 420

37

2940

1260

Days Men Days
Then, If 5 — 287 — 17 54) 15440 (287

5

108

17) 1435 (84

136

474

432

75

420

68

378

Answer 84 men 7

42

Note, If you would work such questions of the double rule of three as have one of their proportions indirect, by one stating; you must multiply the third number of your stating, by that number you would otherwise have placed under your first; and your first number by that you would have placed under the third; as in the following example.

EXAMPLE.

Acres Men Acres

If 54 — 37 — 420

* 17

The number of days which
have relation to the 54 acres,

378

2100

54

37

918

14700

6300

* The number of days
which have
relation to

Men

918) 77700 (84 answer as before

7344

420 acres

4260

3672

588

OF EXCHANGE.

HAVING explained the nature of the Rule of Three, and the manner of resolving questions therein, I am naturally led to treat of its particular use in the exchange of coins.

In the exchange of coins, it is necessary that the par or value of the money in each place be exactly known: for the word par signifies to equalize the money of exchange from one place to that of another place. As when I take up so much money per exchange in one place to pay the just value thereof in another kind of money in another place, without having respect to the price current of exchange for the same, but only to what the money does currently pass for in each place. From whence may be easily found out the profit and loss of all monies drawn or remitted by exchange. But this par being grounded principally upon the current value of coin, the plenty and scarcity thereof, the rising and falling, inhañcement and debasing of the same, it must necessarily follow, that the value of coin is subject to change. An example whereof you have in France, where their coin has been changed, inhañced, and lowered, several times in a few years, and in the year 1720, the French crown, which was sixty sous or three livers, is now raised to seventy five sous, or three livers, fifteen sous.

The denomination in which England, and the following places exchange each with other are, viz.

The exchange of monies from London to Antwerp, Amsterdam, Hamburgh, Liſſe, Middleburgh, and other parts of Flanders and Holland, is valued on the pound sterling of 20 shillings: that is, to pay after the rate of so many shillings and pence, Flemish, for every pound sterling.

The exchange from London to Paris, Roan, and most parts of France, is valued on the French crown at 54d: that is, to pay so many pence, or so many shillings and pence, sterling, for the French crown.

The exchange from London to Venice is made on the ducat at 52d. sterling, to pay so many pence and parts of a penny sterling for every ducat.

The exchange from London to Leghorn, Genoa, Calais, Madrid, and other parts of Spain, is made on the dollar or piece of eight, at 54d sterling, that is, to pay so many pence or parts of a penny sterling for every dollar.

The par at Antwerp, Amsterdam, Hamburgh, Lisse, Middleburgh, and other parts of Flanders, with one pound sterling, is thirty three shillings four pence Flemish, for a pound sterling; which thirty three shillings four pence, do make 10 guilders, at two shillings sterling the guilder, or 10 livres Turnois.

The par at Paris, Roan, and other parts of France, has been reckoned sometimes at 71 sous the crown of 3 livres, Turnois, generally at 60 sous the crown of 3 livres, every livre valued at 1 shilling sixpence sterling, the crown valued at 4s 6d sterling.

The par at Leghorn, Madrid, Calais, Genoa, is at 54 pence sterling for the dollar or piece of eight.

The par at Venice with our sterling money is at 6 livres, 4 sous of Venice per ducat, or 51 pence sterling, sometimes 52 pence.

The Hamburgh par is sometimes reckoned at 4 rix dollars and a half, which makes 32 shillings Flemish for 20 shillings sterling.

The par at Lisbon is at 6s. 8½d on the milrea or 1000 reas.

The par at Oporto is the same as that at Lisbon.

The value of the most usual coins with which England does chiefly exchange, are, viz.

		Sterling money.	
		s.	d.
Holland and Flanders.	1 Stiver	0	1½
	6 Stivers of 1 shilling Flemish	0	7½
	1 Flemish shilling	0	8
	20 Stivers is 1 guilder, or	2	0
	6 Guilders, 1 pound Flemish, 20s. is	12	0
	33 Shillings 4d Flemish	20	0
	1 Zealand common dollar	3	0
	1 Duccatoon	5	6
	1 specie dollar	5	0

Sterling money.

		s.	d.
France.	{ 12 deniers, or 1 soluz	0	3 $\frac{3}{4}$
	{ 20 Soluz, or livre	1	6
	{ 3 Livres, or a French crown	4	6

		s.	d.
Spanish money.	{ 13 $\frac{77}{100}$ Malvadees	0	0 $\frac{3}{4}$
	{ 372 Malvadees, or 1 royal	0	6 $\frac{3}{4}$
	{ 7 $\frac{2}{3}$ Royals is 1 ducat	4	4
	{ 8 Royal piece of copper	4	6
	{ 1 Royal copper	3	0
	{ 17 $\frac{1}{2}$ ditto is 1 piece of eight, or	4	6

		s.	d.
Portug.	{ 12 $\frac{1}{2}$ Reas of Portugal	0	1
	{ 1 Milrea, or 1000 reas	6	8 $\frac{1}{2}$
	{ 1 Testoon	1	3

		s.	d.
Italy.	{ 1 Livre at Leghorn	0	9
	{ 1 Crown current at Florence	5	3
	{ 1 Ducat du banco at Venice	4	4
	{ 1 St Mark	2	10
	{ 1 Palermo florin	2	6

		s.	d.
Germany.	{ 1 Rix-dollar of the empire	4	5 $\frac{1}{4}$
	{ 4 $\frac{1}{4}$ Rix-coillars makes 32 s. Flemish	23	0
	{ at Hamburgh, &c.		
	{ 1 Guilder of Noremburgh	7	1

A merchant in London remits to Rotterdam 375 l. 10s. sterling, at 34s. 8d. for 20s. sterling, How many guilders Flemish must be paid at Rotterdam, and what is gained per exchange?

s.	d.	d.		l.	s.	d.
20	34	8 Flemish	What	375	10	0
	12			20		

416

7510

416

45060

7510

30040

Guilders, stivers.

210)31241610

Answ. 3905—4

2)156208

210)781014

3905

To find the gain or loss in one pound, subtract 33 s. 4d. out of 34 s. 8d. the course of exchange, the difference is 1s. 4d. Flemish per pound, and so much gain is the course of exchange in our favour.

If the course of exchange be under par, it must by parity of reason become a loss to us, and then the course of exchange is to our prejudice.

The like to be observed for the coins exchanged in all other countries.

I will give but one example of loss by exchange, by which, with the foregoing example of gain, the ingenious may with ease, travel thro' the general course of exchange with all countries.

A merchant in London remits a bill of exchange to Amsterdam for 267l. 15s. sterling, at 31s. 3d. Flemish for 20s. sterling, I demand how much Flemish money was paid for the said bill at Amsterdam, and what is lost per pound by exchange?

s.	s.	d.		l.	s.
20	31	3 Flemish	297	15	sterling
		Guil.			Shill.

Answer. 2791—8 paid, and 2 s. 1 d. Flemish per pound lost by the exchange.

Arithmetical Progression

IS when a rank or series of numbers differ orderly from one another, by some common number.

To find the sum of any arithmetical progression, add the first and last numbers together, and multiply that sum by half the number of places, and that product is the sum. But if the number of places be odd, multiply the said number of places by half of the first and last added, and that product is the sum.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

What the sum?

16 Last

1 First

17 Sum

8 Half of the number of places

136 Sum of the whole

Suppose a man hireth a room for a year, and agreeth to pay the first week 5d. the second week 9d. and for the third week 13d. so paying every week 4d. more until 52 weeks or a year is finished, I demand what the rent will come to?

Answer 23l. 3s. 8d.

Here you are to consider that the common increasing number is 4d. so that the last week must amount to 52 times 4 added to the pay of the first week, which is 5d. then will the last week come to 209 pence, then work as in the example.

$$\begin{array}{r}
 51 \\
 4 \\
 \hline
 \text{Product } 204 \\
 5 \\
 \hline
 \text{Added } 209 \text{ the last week } 44 \\
 5 \text{ the first week } 36 \\
 \hline
 \text{Added } 214 \text{ } 8d. \\
 26 \text{ half the weeks in a year } \\
 \hline
 210) 4613 (231. 3s. 8d. \\
 1284 \\
 428 \\
 \hline
 \text{Pence } 5564
 \end{array}$$

Geometrical Progression.

Suppose one sold 12 ells of cloth, to receive for the first ell 1 d. the second 2 d. the third 4 d. and so on doubling, what is paid for the 12 ells?

$$\begin{array}{r}
 0, 1, 2, 3, 4, 5, 6. \\
 1, 2, 4, 8, 16, 32, 64. \\
 32 \\
 128 \\
 192 \\
 2084 \\
 \hline
 \text{Answer } 4097 \text{ Pence}
 \end{array}$$

Note, That if this question had been for a farthing a button, or the like, the answer would have been farthings.

Suppose one sold a horse having 4 shoes, and every shoe 6 nails, to receive for the first nail a farthing, the second nail 2 farthings, the third nail a penny, and so

ARITHMETIC.

doubling, how much is paid for the last nail, and the price of the horse?

Answer 17476/ 5s.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096

$$\begin{array}{r}
 4096 \\
 \hline
 12288 \\
 18432 \\
 81920 \\
 \hline
 8388608 \\
 2
 \end{array}$$

16777216 far.

Or if this question had been of a coat sold at a barley corn a button, and so doubling to 24 buttons (accounting 900 corns to a pint) I divide the 16777216 by the 900 corns, the quotient gives about 11641 pints, which divide by 64 (the pints in a bushel) the quotient gives about 262 bushels, or about 36 quarters of barley for the coat.

The Rule of Fellowship or Company

MAY fitly be divided into gain, loss, and time.

A general Rule.

As general stock to general profit bears;
So each man's stock in general profit shares.

That is to say,

Every man's particular stock being added together, the total must be the first number in the rule of three, the gains the second, and every man's particular stock the third; as,

Suppose two booksellers in company, Y laid in 20l. Z laid in 40l. whereby was gained 58l. what is each man's part of the gain?

P 24

ARITHMETIC.

$$\begin{array}{r} 20 \\ Z 40 \\ \hline 60 \end{array}$$

If 60l gain 50l, what will 20l gain?

$$\begin{array}{r} 20 \\ 60 \overline{) 1000} (16 \text{ l } 13 \text{ s } 4 \text{ d} \\ \underline{60} \\ 40 \\ \underline{36} \\ 4 \end{array}$$

If 60l gain 50l, what will 40l gain?

$$\begin{array}{r} 40 \\ 60 \overline{) 2000} (33 \text{ l } 6 \text{ s } 8 \text{ d} \\ \underline{180} \\ 200 \\ \underline{180} \\ 20 \end{array}$$

$$\begin{array}{r} 20 \\ 18 \overline{) 180} \\ \underline{18} \\ 0 \end{array}$$

$$\begin{array}{r} 1 \text{ s } d \\ 33 \text{ l } 06 \text{ s } 8 \\ 16 \text{ l } 13 \text{ s } 4 \\ \hline \end{array}$$

Proof 50 00 0

Suppose two merchants make a stock, B laid 45l. and C laid in 68l. whereby they gained 32l. how must the gain be divided?

If 113l gain 32l, what will 45l gain?

$$\begin{array}{r} B 45 \\ C 68 \\ \hline 113 \end{array}$$

$$\begin{array}{r} 45 \\ 113 \overline{) 1660} \\ \underline{450} \\ 1600 \\ \underline{1280} \\ 320 \end{array}$$

113l 1440l (12l 84 B's part.

$$\begin{array}{r} 113 \\ 310 \\ 226 \\ \hline 84 \end{array}$$

If 113l gain 32l, what will 68l gain?

68

256

193

113

1046

1027

29

The 29 of the fraction multiplied by 240, the pence in 20s. and the product divided by 113, the quotient tells the pence.

Suppose three merchants F, G and C, join their monies to make a stock of 25000l, of which F laid 10000l, G 8000l and C 7000l, with this, after a certain time of trading, they gained 7500l, how must this be parted?

If 25000l gain 7500, what will 10000l gain?

10000

25000 75000 1000 (3000l. F's part

75

0000

If 25000l gain 7500l, what will 8000l gain?

8000

25000 (600000 (2400l G's part

50

100

100

0

If 25000l gain 7500l, what will 7000l gain?

$$\begin{array}{r}
 25000 \text{ (525000) } 1000 \text{ (2100l C's part)} \\
 \underline{50} \quad \quad \quad \text{F 3000l} \\
 \quad \quad \quad \text{G 2400l} \\
 \quad \quad \quad \text{C 2100l} \quad \left. \vphantom{\begin{array}{l} \text{F} \\ \text{G} \\ \text{C} \end{array}} \right\} \text{ Stocks added} \\
 \underline{25} \\
 \underline{25} \\
 \hline
 0 \quad \quad \quad 7500
 \end{array}$$

The Rule of Fellowship with Time.

The Rule.

EVERY man's stock must be multiplied by his time, and the total of these products added together, is the first number, the gain or loss the second number, and the product of every man's particular stock and time, the third number.

Suppose two merchants in company, A laid 100l for 4 months, B put in 136l for 3 months, and they gained 50l, what is each man's part?

$$\begin{array}{r}
 \text{A put in 100l} \\
 \text{B put in 136l} \quad \left. \vphantom{\begin{array}{l} \text{A} \\ \text{B} \end{array}} \right\} \text{ multiplied by } \left\{ \begin{array}{l} 4 \\ 3 \end{array} \right\} \text{ give } \left\{ \begin{array}{l} 400 \\ 408 \end{array} \right\} \\
 \hline
 808
 \end{array}$$

If 808l gain 50l, what will 408l gain?

$$\begin{array}{r}
 808 \text{ (20000) } 24 \text{ (508 A's part)} \\
 \underline{1616} \\
 \quad \quad \quad 3840 \\
 \quad \quad \quad 3232 \\
 \hline
 608
 \end{array}$$

ARITHMETIC.

175

If 808l gain 50l, what will 408l gain?

408

400

2000

808)20400(25l 200 B's part.

1616

4240

4040

200

Suppose three farmers, as A, B and C hold a pasture for which they pay 45l per annum. A hath 24 oxen 32 days, B hath 12 48 days, and C fed 16 oxen there 49 days, what must every man pay of the rent?

Oxen

A 23

B 12

C 16

Days

32

48

49

multiplied by

give

768

576

384

1728

RULES of PRACTICE.

The even parts

Of a pound

s	d	l
10	0	—
6	8	—
5	0	—
4	0	—
3	4	—
2	6	—
2	0	—
1	8	—

Of a shill.

d	s
6	—
4	—
3	—
2	—
1½	—
1	—

Of a hund

lb	C
56	—
84	—
28	—
16	—
14	—
8	—
7	—

1. When the given price is pence, take your parts in shillings, the product divided by 20 gives the answer in pounds.

Or, You may bring it into pounds, at once, by cutting off the last figure, and by considering that 240 pence is 1 pound, whereof 8d is $\frac{1}{3}$, 6d is $\frac{1}{4}$, 4d is $\frac{1}{6}$, 3d is $\frac{1}{8}$, 2d is $\frac{1}{10}$.

EXAMPLES.

254 lb of tobacco at 1d.	716 ells at 3d
$\frac{1}{20}$ 211 2d	$\frac{1}{20}$ L 8 19 0 facit
L 11 11 2 facit	215 lb at 4d
254 lb at 2d	$\frac{1}{20}$ L 3 11 8 facit
$\frac{1}{20}$ 42 2	643 gall. at 6d
L 2 2 4 facit	$\frac{1}{20}$ L 16 1 6

The three last examples are brought into pounds at one operation, after which manner any sum of practice may be readily cast up.

Here you may see that 254 pounds of tobacco at 1d a pound, divided by the $\frac{1}{20}$, gives 211 2d, and that divided by 20, by cutting off the last figure, and taking $\frac{1}{20}$ of it, gives 11 11 2, the price of 254 pounds of tobacco: and for 2d the pound take the $\frac{1}{10}$, because 2d is the $\frac{1}{10}$ part of a shilling, and for 3d a pound take $\frac{1}{8}$, and so for the others at 4d and 6d.

2. When the given price is such pence as are no even part of a shilling, take first the greatest even part of a shilling, and then part of that part: add them together, and divide the product by 20, or cut off the last figure, and take $\frac{1}{20}$.

d	2121 ells at 5d	748 lb at 4d
4	707 s	6d is $\frac{1}{2}$ or 374
1	176—9	of which 1d, or $\frac{1}{4}$ is 62—4
5	883—9	436
	44—3—9 facit	L 21—16—4

254 lb of tobacco at 9d and $10\frac{1}{2}$ a pound		254 at $10\frac{1}{2}$ d
d		
6	$\frac{1}{2}$ 127	127 shillings in 254 6d
3	$\frac{1}{2}$ 63—6	84—8 in 254 groats
9	$\frac{1}{2}$ 190—6	10—7 in 254 halfpence
	9—10—6 facit	5—3 $\frac{1}{2}$ in 254 farthings
		2217—6 $\frac{1}{2}$
		11—7—6 $\frac{1}{2}$ facit

Demonstration. In 254 pounds of tobacco at $10\frac{1}{2}$ d a pound, there must be 254 sixpences, which is 127 shillings, and 254 groats, which is 84s 8d, and 254 halfpence, which is 10s 7d, and 254 farthings, which is 5s 3 $\frac{1}{2}$ d, all these added together, make 227s 6 $\frac{1}{2}$ d, which divided by 20, gives the answer 11l 7s 6 $\frac{1}{2}$ d.

d	614 lb at 11 d	563 lb at $11\frac{1}{2}$ d
6	307	6 $\frac{1}{2}$ 281—6d
4	$\frac{1}{2}$ 204—8d	4 $\frac{1}{2}$ 187—8
1	$\frac{1}{2}$ 51—2	1 $\frac{1}{2}$ 70—4 $\frac{1}{2}$
11	5612—10	5319—6 $\frac{1}{2}$
	2—2—10 fa.	67—19—6 $\frac{1}{2}$ facit

3. If the given price be any number of pence above 1s, and less than 2s, take the aliquot parts in pence, as in the last precedent, to which add the given quantity, for 1s, and proceed as before.

EXAMPLES.

$\frac{1}{2}$	254 lb at 15 d	$\frac{1}{4}$	254 lb. at 17 d
d	63—6	$\frac{1}{4}$	84—8
	—	$\frac{1}{4}$	21—2
	3117—6		—
	—		3519—10
	15—17—6 facit		—
			17—19—10 facit

$\frac{1}{2}$	264 yds at 18 d	$\frac{1}{4}$	295 gallons at 19 d
$\frac{1}{2}$	132	$\frac{1}{4}$	147—6
	—	$\frac{1}{4}$	24—7
	3916		—
	—		4617—1
	19—10—0 facit		—
			23—7—1 facit

$\frac{1}{2}$	672 lb at 22 $\frac{1}{2}$ d	$\frac{1}{2}$	456 ells at 25 $\frac{1}{2}$ d
$\frac{1}{2}$	336	$\frac{1}{2}$	228
$\frac{1}{2}$	224	$\frac{1}{2}$	152
$\frac{1}{2}$	42	$\frac{1}{2}$	38
	—		9—6
	12714		—
	—		8813—6
	65—14—0 facit		—
			44—3—6 facit

In 672 lb at 22 $\frac{1}{2}$ d a lb I take $\frac{1}{2}$ for 6 d. the $\frac{1}{2}$ for 1d, and the $\frac{1}{2}$ for the $\frac{1}{2}$ because $\frac{1}{2}$ is the $\frac{1}{2}$ of 6d, by which you will find that in 572 sixpences there is 336 shillings, and in 672 groats there is 224 shillings, and in 672 three farthings there are 42 shillings.

4. If the given price be such shillings as are an even-part of a pound sterling, take such a part of the given quantity, and the quotient is pounds.

$\frac{1}{2}$	Ells s d	$\frac{1}{2}$	Yards
$\frac{1}{2}$	433 at 1—8	$\frac{1}{2}$	271 at 2s
	—		—
$\frac{1}{2}$	36—1—0 facit	$\frac{1}{2}$	27—2—0 facit
	—		—
	674 at 2s 6d		495 at 3s 6d
	—		—
$\frac{1}{2}$	84—5—0 facit	$\frac{1}{2}$	82—10—0 facit

Crowns	Dollars
457 at 5 s	612 at 4 s
<u>114 5 0 facit</u>	<u>122 8 0 facit</u>
295 at 6 s 8 d	372 at 10 s
<u>98 6 8 facit</u>	<u>186 0 0 facit</u>

In this first example of 433 ells at 1 s 8 d, I take the $\frac{1}{12}$, because 1 s 8 d is the $\frac{1}{12}$ of 1 l, and say, 12 in 43 is 3 times, rest 7, which makes the 3 to be 73, then 12 in 73 is 6 times, rest 1, which is 1 s 8 d, I put down as above.

5. If the given price be such shillings and pence as are no even parts of a pound, multiply the given quantity by the number of shillings, and take the aliquot parts in pence, and proceed according to the second rule.

Ells	Ells
375 at 8 s 6 d	493 at 15 s 10 d
<u>8</u>	<u>15</u>
3000	2465
<u>187 6</u>	493
3101 8 6	<u>246 6 d</u>
<u>159 7 6</u>	<u>164 4 d</u>
	78015 10
	<u>390 5 10 facit</u>
C s d	C s d
295 at 12 9	214 at 7 4
<u>12</u>	<u>7</u>
3540	1498
<u>47 6</u>	107
73 9	<u>53 6</u>
<u>2761 3</u>	<u>35 8</u>
1881 3 facit	16914
	<u>84 14 2 facit</u>

6. If your given price be any number of pounds, shillings and pence; reduce first your pounds and shillings into shillings, and proceed according to the last rule.

Pieces	l	s	d	Tuns	l	s	d
754 at	4	3	7	176 at	3	7	10
83		20		67		20	
2262		83		1232		67	
6032				1056			
$\frac{1}{2}$ 377							
$\frac{1}{8}$ 62		10		11792			
				$\frac{1}{2}$ 88			
6302	11	10		$\frac{1}{4}$ 58		8	
4151	1	10		1193	18	8	
				596 18 8 facit			

7. If your given price be any number of pounds, and exceeding five pounds, then multiply your given quantity by the number of pounds, and take your aliquot parts in shillings and pence, viz.

	C	l	s	d	Hhds	l	s	d
	74 at	11	12	6	394 at	16	16	3
	11				16			
s. 8	814				2364 } at 16			
10 $\frac{1}{2}$	36				394 } at 16			
2 $\frac{1}{2}$ $\frac{1}{4}$	9	5	0		197 at 10			
					$\frac{1}{2}$ 98	10	at	5
	360	5	0	facit	$\frac{1}{4}$ 19	14	at	1
					$\frac{1}{8}$ 5	18	6	at 3d
					1.	6624	0	6 facit

8. If the given quantity be any number of C. qrs. or pounds, or tuns, C. qrs. or pounds, &c. work as before where no part is, and take your aliquot parts in quarters and pounds, or in C. qrs. and pounds, and add them to your first work. An example or two will make this plain.

ARITHMETIC.

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C	s	d	C	s	d
75 $\frac{1}{2}$ at 22 6			63 $\frac{1}{2}$ at 12 10		
22			12 mul.		
150			756 s		
150			$\frac{1}{2}$ 31 6d		
$\frac{1}{4}$ 37 6			$\frac{1}{4}$ 21		
11 3			9 7 $\frac{1}{2}$ C		
169 18 9			81 18 1 Sum		
84 18 9 facit			40 18 1 $\frac{1}{2}$		

In the example of 63 $\frac{1}{2}$ C at 12s 10d the C weight, I multiply the C by 12s, and take the parts in pence for the odd pence; then for the $\frac{1}{2}$ of C I first take the $\frac{1}{2}$ of the price of a C, and that makes 6s 5d, the price of $\frac{1}{2}$ a C, and then I take the half of that, which gives 3s 2 $\frac{1}{2}$ d the price of $\frac{1}{4}$ of a C. Add them together it gives the price of $\frac{3}{4}$ of a C, which is 9s 7 $\frac{1}{2}$ d, and must be added to your first work. Two or three examples more will make it familiar and easy to any capacity.

84 C 3 qrs 11 lb at	21s 10d
21	$\frac{1}{2}$ 10 11
84	lb $\frac{1}{4}$ 5 5 $\frac{1}{2}$
168	$\frac{1}{4}$ 7 4 $\frac{1}{4}$
$\frac{1}{2}$ 42	$\frac{1}{4}$ 4 9 $\frac{1}{4}$
$\frac{1}{4}$ 28	
18 6	18 6
185 12 6	The price of 3
92 12 6	qrs 11 lb

Ten C qr lb l s d
 12 14 3 14 at 15 17 06 a tun
 12

190	10	00
$\frac{1}{2}$ 7	18	9
$\frac{1}{2}$ 3	3	6
$\frac{1}{2}$ 0	7	11 $\frac{1}{2}$
$\frac{1}{2}$ 0	3	11 $\frac{1}{2}$
$\frac{1}{2}$ 0	1	11 $\frac{1}{2}$
202	06	01 $\frac{1}{2}$

The Order of deducting Tare and Tret.

Gross is the weight of a commodity, with the hoghead, chest, box, or whatever else contains it.

Tare is the allowance given for the weight of the cask, hoghead, &c.

Tret is an allowance of 4 pounds in 104 pounds, for waste and dust on some sort of goods.

	C	qr	lb	lb	lb
Example 11 hhd. qt.	45	3	15	gross, tare	14 per 112
14 $\frac{1}{8}$				how many lb neat?	
	5	2	26	tare	
Answer	40	0	17		

1. Here 14 pounds tare being $\frac{1}{8}$ of 112 pounds, take $\frac{1}{8}$ of the gross, the quotient gives the whole tare, which subtract from the gross, gives the neat weight.

The operation is performed thus : divide the gross by 8, say 8 in 45, 5 times, and 5 C remains, which is 20 qrs, and 3 is 23 : then 8 in 23, 2 times, 7 qrs remain, which turned into pounds by 28, and added to the 15 pounds, make 211 pounds, then 8 in 211 is 26 times. So the tare is 5 C, 2 qrs, 26 pounds.

Example C. qr. lb.

40 0 17
22
80
80
20
0 3 4 $\frac{1}{2}$

90 0 3 4 $\frac{1}{2}$

L. 45 3 4 $\frac{1}{2}$

s. d.

Neat at 22 6

lb.

14 $\frac{1}{2}$ 2 9
2 $\frac{1}{2}$ 0 4
1 $\frac{1}{2}$ 0 2

facit 3 4 $\frac{1}{2}$

price of 17 lb

If the tare be 16 pounds in 112 pounds, take $\frac{1}{7}$ of the gross, and work as before.

If 18 pounds per 112 pounds, for tare, take the aliquot parts, viz,

For 16 lb take the $\frac{1}{7}$ } Add the tare of 16, and the
For 2 take the $\frac{1}{8}$ } tare of 2 together, the total
subtract from the gross, and work as before.

lb lb } lb
If 20 in 112 for tare } for 16 take $\frac{1}{7}$
for 4 take $\frac{1}{4}$ of 16

2. When an allowance is made for tret, then (after the tare is subtracted from the gross) the remainder is called futtle, which divide by 26 (because 4 pounds is the 26th part of 104, the allowance always given for tret) the quotient gives the tret, which subtracted from the futtle, gives the neat weight.

Example. C qr. lb lb lb lb lb
 45 3 15 gr. tare 16 in 112 tret 4 in 104
 16 $\frac{1}{2}$ 6 2 06 tare

39 1 09 futtle 4) 104
 4
 —————
 26

157
 28
 —————

1265
 324
 —————

4405 pounds futtle 26) 4405
 169 tret —180

4236 neat pound, at 6d 169 245
 —————
 11

6 $\frac{3}{4}$ 2118 s

L 105 10 0 facit.

3. If the allowance for tare be 8 pounds, 10 pounds, 12 pounds, in 112, or any other lesser number, whether an aliquot part of 112 or not, in such cases, divide the gross into two parts by 2, which will make it half hundreds, then say, 8 is $\frac{2}{7}$ of 1 $\frac{1}{2}$ C. or 12 pounds in 112 pounds.

Rule. From $\frac{1}{2}$ of the gross, take $\frac{2}{7}$ of that 8th for tare at 12 per cent. When you have found tare subtract it always out of the whole gross.

I might enumerate examples, but these being sufficient to instruct any ordinary capacity in tare and tret,

I shall proceed to shew some other abbreviated ways of calling up goods and merchandize.

For retailers of small parcels, as mercers, linnen and woollen drapers, haberdashers of hats, &c.

THE most abbreviate and ready way is, to multiply the price by the quantity.

Example. Sold 7 yards of cloth, at 14s 6d a yard.]

$$\begin{array}{r} 7 \\ \hline \text{Ans. L. } 5-1-6 \end{array}$$

Say 7 times 4 is 42, which is 3s 6d, set down 6 pence and carry 3 shillings to the place of shillings, and say, 7 times 4 is 28, and 3 I carry is 31, set down 1s, and carry 3 angels to the place of tens of shillings, and say, 7 times 1 is 7, and 3 I carry is 10 angels, which is 5l. fix the 5l in the place of pounds: so the price of 7 yards is 5l 1s 6d.

Example. Sold 11 yards and $\frac{1}{2}$ at 23s 3d.

$$\begin{array}{r} 11 \\ \hline \text{L. } 7-5-9 \\ \text{the } \frac{1}{2} \text{ yard } 6-7\frac{1}{2} \\ \hline \text{Ans. L. } 7 \ 12 \ 4\frac{1}{2} \end{array}$$

For half a yard, take half of 13s 3d and add to the product of 11 yards.

Object. There are many numbers under 100 that are not included in the multiplication table, or being multiplied together, will not produce the given quantity; and so consequently cannot be done by this new way of practice.

Ans. It is very true, there are several numbers under 100, that no two numbers multiplied together can produce them, such as 13, 17, 19, 25, 29, 31, 33, 37, and many more.

Rule. In such cases, multiply by two such numbers, as being multiplied together will come nearest to such odd numbers; then multiply the price by that part which wants to make up the given quantity. An example of which follows.

Example. 29 ells at 7 ^s 9 ^d

$$\begin{array}{r}
 29 \times 7 = 203 \text{ s} \\
 203 \text{ s} = 17 \text{ l } 7 \text{ s} \\
 17 \text{ l } 7 \text{ s} = 17 \text{ l } 14 \text{ s} \\
 17 \text{ l } 14 \text{ s} = 16 \text{ l } 17 \text{ s} \\
 16 \text{ l } 17 \text{ s} = 15 \text{ l } 17 \text{ s} \\
 15 \text{ l } 17 \text{ s} = 14 \text{ l } 17 \text{ s} \\
 14 \text{ l } 17 \text{ s} = 13 \text{ l } 17 \text{ s} \\
 13 \text{ l } 17 \text{ s} = 12 \text{ l } 17 \text{ s} \\
 12 \text{ l } 17 \text{ s} = 11 \text{ l } 17 \text{ s} \\
 11 \text{ l } 17 \text{ s} = 10 \text{ l } 17 \text{ s} \\
 10 \text{ l } 17 \text{ s} = 9 \text{ l } 17 \text{ s} \\
 9 \text{ l } 17 \text{ s} = 8 \text{ l } 17 \text{ s} \\
 8 \text{ l } 17 \text{ s} = 7 \text{ l } 17 \text{ s} \\
 7 \text{ l } 17 \text{ s} = 6 \text{ l } 17 \text{ s} \\
 6 \text{ l } 17 \text{ s} = 5 \text{ l } 17 \text{ s} \\
 5 \text{ l } 17 \text{ s} = 4 \text{ l } 17 \text{ s} \\
 4 \text{ l } 17 \text{ s} = 3 \text{ l } 17 \text{ s} \\
 3 \text{ l } 17 \text{ s} = 2 \text{ l } 17 \text{ s} \\
 2 \text{ l } 17 \text{ s} = 1 \text{ l } 17 \text{ s} \\
 1 \text{ l } 17 \text{ s} = 0 \text{ l } 17 \text{ s}
 \end{array}$$

Here I multiply by 7 and 4, because 7 times 4 is 28, and for the odd ell 4 to make it 29, I add the price of the ell to the product.

Ans. 11 l 14 s 9 d

Ans. 11 04 9

FRACTIONS

Are of two kinds { VULGAR and DECIMAL.

A Vulgar fraction is caused by division of whole numbers, the remainder of which being less than the divisor, called the numerator, is always the dividend, and the denominator is the divisor.

3 Numerator.

4 Denominator.

A decimal fraction is such a one, whose denominator is understood, and therefore need not be expressed: and is an unit with as many cyphers following it, as there be figures and cyphers in the numerator.

Decimal fractions, whether they stand alone, or be joined with integers, have always a comma or point before them to distinguish them from integers, as, 5,560042

In decimals the value of every figure or cypher decreases by a tenfold proportion from the units place towards the right hand, as the whole numbers do increase the value towards the left hand, by the like proportion as you may see in the following table.



Thous.	Thous.
5 X Thous.	5 X Thous.
4 Thous.	4 Thous.
3 Hund.	3 Hund.
2 Tens	2 Tens
1 Units	
	2 Tens
	3 Hund.
	4 Thous.
	5 X Thous.
	6 C Thous.

Whole number | Decimals

Cyphers before integers. and at the end, or right hand of decimals are of no value ; but after integers, and before decimals they have their value ; for in integers they increase, and in decimals they diminish the value of the other figures joined with them.

The integers, 005 is but 5, and 004 is but 4, and 06 is but 6.

but in decimals, 005 is $\frac{5}{1000}$ and ,004 is $\frac{4}{1000}$, and ,06 is $\frac{6}{100}$.

And again, in integers 500 is five hundred, and 400 is four hundred.

In decimals 500 is but 5, and 400 is but 4, &c.

Next to abbreviation and valuation of vulgar fractions, there is little required but to know how to bring a fraction of a lesser name into a fraction of a greater name, and to reduce fractions of diverse unequal denominators to one common denominator, which being well understood, you may with as much ease add, subtract, multiply and divide a fraction as you can a whole number,

In decimals a fraction is seldom abbreviated: therefore,

1. To abbreviate any vulgar fractions, find such a number for dividing both the numerator and denominator thereof so, that no remainder be on either of the divisions.

Example. Abbreviate $\frac{96}{120}$ into $\frac{4}{5}$ its lowest term.

Say, 12 in 96, 8 times, and 12 in 120, 10, then the fractions is $\frac{8}{10}$; then say, 2 in 8, 4 times, and 2 in 10, 5 times, then the fraction is $\frac{4}{5}$. so that 4 is to 5, as 96 to 120.

2. To know what part of a pound sterling any number of shillings and pence is, bring the shillings and pence

into pence for a numerator, and place 240 under it (the pence of one pound) for a denominator.

Example. What part of a pound is 11s 3d?

Facit $\frac{11}{240}$.

3. To reduce vulgar fractions into decimals, Add cyphers at pleasure to the numerator, and divide by the denominator. Example, viz.

Reduce 11s 3d into a decimal fraction.

$$\begin{array}{r} 12 \quad 240 \overline{) 1350000} \\ \underline{} \end{array}$$

$$\begin{array}{r} 135 \quad 150 \\ \underline{} \end{array}$$

$$\begin{array}{r} 60 \\ \underline{} \end{array}$$

$$\begin{array}{r} 120 \\ \underline{} \end{array}$$

$$\begin{array}{r} 240 \\ \underline{} \end{array}$$

$$\begin{array}{r} 0 \end{array}$$

Or, $\frac{1350000}{240000}$, or, .5625.

Example. Reduce $\frac{4}{5}$ into a decimal fraction.

$$5 \overline{) 4000}$$

$$\begin{array}{r} 800 \\ \underline{} \end{array}$$

Or rather .8

Facit .800

4. To value a vulgar fraction, Multiply the integer into the numerator, and divide by the denominator.

What is the $\frac{3}{4}$ of a pound sterling?

$$20$$

$$5$$

$$8 \overline{) 100}$$

$$4$$

$$80$$

$$12 \overline{) 6}$$

Facit .75

An ell worth 7s—8 what is $\frac{3}{4}$ worth?

$$2$$

$$5 \overline{) 15}$$

$$\begin{array}{r} 3 \end{array}$$

$$\begin{array}{r} 15 \\ \underline{} \end{array}$$

5. To value a mixt number, Multiply the mixt number by the numerator, and divide by the denominator.
Example.

A ship worth 794—11—9 what is $\frac{5}{8}$ worth?

$$\begin{array}{r} 8) 3972-17-9 \\ \text{facit } 496-12-4\frac{1}{2} \end{array}$$

6. To value a decimal fraction, expressing coin; every prime or unit in the first place is 1s. value; every 5 in the second place 1s. and the rest farthings; but if they exceed $\frac{7}{1000}$ there must be one farthing abated.

Reduce $\frac{7}{8}$ of a pound into a decimal fraction.

$$9) .700000$$

Here 7 primes is 14s and 5 taken out of the second place is 1s which makes 15s, then 2 remains, which is 27 to the thirds, or place of farthings, out of which abate 1 for $\frac{7}{1000}$, it makes 15s 6 $\frac{1}{4}$ d, which is the $\frac{7}{8}$ of a pound sterling.

7. To reduce vulgar fractions to a common denominator, Multiply the numerator of each fraction into every denominator, except its own, which makes the product of a new numerator; then multiply all the denominators together, and that product is one common denominator to all the new numerators. Example.

Reduce $\frac{3}{4}$ and $\frac{1}{2}$ to a common denominator.

Facit $\frac{6}{8}$ and $\frac{4}{8}$

Here 12 is the common denominator to both the new numerators, viz. 8 and 9, and you find that 8 is to 12 as 2 to 3, and 9 is to 12, as 3 to 4.

So that $\frac{2}{3}$ is to $\frac{3}{4}$, $\frac{8}{12}$ to $\frac{9}{12}$

Reduce $\frac{3}{4}$, and $\frac{5}{8}$, and $\frac{7}{8}$ of a pound to a common denominator.

To prove your work, Divide your new numerator by the numerator of that fraction, and divide the common denominator of the fraction by the denominator, if both quotients are equal, your work is true.

192 192 192 192

Exam. $\frac{144}{192}$, is $\frac{48}{48}$ here divided by 3, make 48, and 192 divided by 4, gives 48, which was to be proved. Or, you may prove your work of abbreviation of fractions; but it is attended with much difficulty, where 4 or more fractions are reduced to a common denominator.

Now this reduction of fractions is of little use otherwise than to prepare a fraction to be either added, subtracted, multiplied, or divided.

As if the $\frac{3}{4}$ and $\frac{5}{8}$ and $\frac{7}{8}$ were to be added together, reduce them first into a common denominator, as in the last rule, it makes $\frac{96}{192}$ and $\frac{120}{192}$ and $\frac{168}{192}$. Add all the new numerators together, make 472, which divided by 192, the common denominator, makes $2\frac{88}{192}$, as in the following example.

Addition of Vulgar Fractions

}	144	
}	160	
}	168	
192)472		
2) 88		

Facit $2\frac{88}{192}$ or $9\frac{1}{2}$

And if the $\frac{3}{4}$ and $\frac{5}{8}$ and $\frac{7}{8}$ were to be added together in decimals, reduce them first into decimal fractions, according to the third rule, and the operation stands, viz.

0000

Addition of Decimals.

}	.75	Say, 4 in 30 is 7 times, and 4	
}	.8333		in 20 is 5 times; and so for the
}	.875		rest.
		1, d	

Facit 2,4583, or, 2 9 2

By this addition you see how much less work is made by decimals than in vulgar fractions, and how easy their value is found out according to the sixth rule.

8. To reduce the compound fractions, or fractions of a lesser name into the fractions of a greater, multiply the numerators together for a new numerator, and the denominators multiply together for a new denominator.

Reduce $\frac{3}{4}$ of a penny into the proper fraction of a pound sterling.

Say $\frac{3}{4}$ of $\frac{1}{12}$ of $\frac{1}{20}$, or $\frac{3}{4}$ of $\frac{1}{240}$, facit $\frac{3}{960}$.

9. To reduce a mixt number of a lesser name into the fractions of a greater, Reduce the mixt number into an improper fraction, and work as before.

Reduce $3\frac{1}{2}$ into the proper fraction of a pound sterling.

$\frac{7}{2}$ of $\frac{1}{12}$ of $\frac{1}{20}$ or $\frac{7}{2}$ of $\frac{1}{240}$, facit $\frac{7}{480}$.

By the same rule, you may reduce any sort of weights or measure.

For compound fractions, their use is chiefly to bring fractions of divers denominations to one and the same denomination.

As if the $\frac{3}{4}$ of a penny, $\frac{2}{3}$ of a shilling, and $\frac{7}{8}$ of a pound were added together.

The $\frac{3}{4}$ of a penny must be reduced into the fraction of a pound, and the $\frac{2}{3}$ of a shilling, must be reduced into the fraction of a pound, thus :

Then the fractions to be added are $\frac{3}{960}$, and $\frac{2}{80}$ and $\frac{7}{8}$, which reduce to a common denominator, and add them together, either by decimals or vulgar fractions.

$\frac{3}{4}$ of $\frac{1}{240}$ fac. $\frac{3}{960}$
 $\frac{2}{3}$ of $\frac{1}{20}$ fac. $\frac{2}{60}$

Addition of Fractions.

1. IF the fractions to be added have one common denominator, add all the numerators together, and divide the product by the common denominator.

Example. Add $\left\{ \frac{2}{3}, \frac{1}{4}, \frac{1}{6} \right\}$ of a pound together.

$$\begin{array}{r} 12 \overline{) 20} \\ \text{Facit } 1 \frac{2}{3} \end{array}$$

g. If the fractions to be added be of different denominators, reduce them to a common denominator, and proceed as before.

Example. Add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ together.

$$\begin{array}{r} 8 \quad 84 \\ 4 \quad 28 \quad 24 \quad 8 \quad 72 \\ \hline 32 \quad 3 \quad 3 \quad 96 \quad 64 \\ 3 \quad 84 \quad 72 \quad 96 \quad 220 \\ \hline 96 \quad 96 \quad 96 \quad \text{Facit } 2 \frac{2}{3} \end{array}$$

To add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ of a pound in decimals, reduce them into decimal fractions, and add them up as in whole numbers, keeping the place of units just under each other.

$$\text{Add } \left\{ \begin{array}{l} \frac{7}{8} \text{ } 875 \\ \frac{3}{4} \text{ } ,75 \\ \frac{2}{3} \text{ } ,6666 \end{array} \right.$$

$$\hline 2,2916$$

$$\begin{array}{r} l \quad s \quad d \\ \text{Facit } 5-4-10 \end{array}$$

$$8 \overline{) 1000}$$

$$\hline ,875$$

$$4 \overline{) 3000}$$

$$75$$

$$3 \overline{) 20000}$$

$$\hline 6666$$

Subtraction of Fractions.

1. **T**O subtract fractions of different denominators, reduce them to a common denominator, and subtract the lesser fraction from the greater.

Example. From $\frac{1}{2}l.$ take $\frac{7}{8}l.$ from $\frac{81}{16}$

$$\begin{array}{r} \frac{1}{2}l. \\ 9 \end{array} \quad \begin{array}{r} \frac{7}{8}l. \\ 8 \end{array} \quad \begin{array}{r} \text{take } \frac{9}{16} \\ \text{Facit } \frac{1}{16} \end{array}$$

2. If you have a mixt number (or integer and fraction) and the fraction to be subtracted be greater than the fraction from which you are to subtract,

Borrow an integer from the mixt number, and work as in subtraction of whole numbers.

Example. From $11\frac{3}{4} - \frac{9}{12}$

Take $2\frac{3}{4} - \frac{9}{12}$

$8\frac{3}{4}$

Here I cannot take $\frac{9}{12}$ out of $\frac{3}{4}$, therefore, I borrow an integer, viz. 12, and say, 9 out of 12, rests 3, to which add $\frac{3}{4}$

rest $\frac{11}{12}$ and carry 1 to 2, is 3 $l.$ out of 11 $l.$ rest 8, and facit $\frac{11}{12}$.

From $25\frac{8}{12}$

from 42

Take $19\frac{7}{12}$

take $16\frac{11}{12}$

Facit $15\frac{8}{12}$

facit $25\frac{8}{12}$

Subtraction of decimals is the same as in whole numbers, keeping the place of units just under each other of the integers and primes under primes of the decimals, &c.

l.
From $\frac{7}{8}, 875$

Take $\frac{1}{4}, 75$

s. d.

Rest, 125 or 2—6

l. s. d.
the $\frac{7}{8}$ is — 17—6

$\frac{1}{4}$ is — 15—0

Rests 2—6

Equal to the Decimal, 125

Multiplication of Fractions.

1. **T**O multiply proper fractions, multiply the numerators together for a new numerator, and the denominators multiply together for a denominator.

Example. Multiply $\frac{2}{3}$ by $\frac{5}{6}$, facit $\frac{10}{18}$.

R

2. If a mixt number and a fraction are to be multiplied together, reduce the mixt number into an improper fraction, and work as in the last.

Example. Multiply $11 \frac{3}{4}$ by $\frac{3}{4}$.

$$\frac{47}{4} \text{ by } \frac{3}{4} \text{ facit } \frac{141}{16}.$$

Example. Multiply $11 \frac{3}{4}$ by $2 \frac{1}{2}$

$$\frac{47}{4} \text{ by } \frac{5}{2} \text{ fac. } \frac{235}{8} \text{ or } 29 \frac{3}{8}$$

3. To multiply a mixt number by an integer, make the integer an improper fraction, by placing (1) under it, and reduce your mixt number into an improper fraction, and work as in the first rule.

Example. Multiply $7 \frac{3}{8}$ by 4

$$\frac{57}{8} \text{ by } \frac{4}{1} \text{ facit } \frac{228}{8}.$$

4. Multiplication of decimals is the same as in whole numbers, saving as many decimal parts as are in the multiplicand and multiplier, so many must be cut off from the product, which if it have not so many places, the defect must be supplied with cyphers towards the left hand.

Multiply ,1005	11 ,83
by ,631	2 ,87
1005	8281
3015	9464
Facit ,0031 155	2366
	33 ,9521

Division of Fractions.

1. **T**O divide single fractions, there is no need to reduce the fractions to a common denominator,

but multiply the numerator of the divisor, by the denominator of the dividend. And contrary for the terms of the quotient thus :

Example. Divide $\frac{7}{8}$ by $\frac{1}{2}$

$$\frac{7}{8} \div \frac{1}{2} \text{ or } 1\frac{5}{8}$$

2. If it happens that the fractions of the divisor be greater than the fractions of the dividend, the facit of such division is a fraction.

Example. Divide $\frac{3}{4}$ by $\frac{7}{8}$

$$\frac{3}{4} \div \frac{7}{8} \left(\frac{3}{7} \right)$$

Facit $\frac{3}{7}$

3. To divide an integer by a fraction, multiply the integer into the denominator, and divide by the numerator.

Example. Divide 8 by $\frac{5}{8}$

$$8 \div \frac{5}{8} \left(\frac{48}{5} \right)$$

$9\frac{3}{5}$ Facit.

4. To divide a fraction by an integer, place the numbers as follows, and work as by the first rule.

Example. Divide $\frac{3}{4}$ by 3

$$\frac{3}{4} \div 3 \left(\frac{1}{4} \right)$$

Facit $\frac{1}{4}$

5. To divide a mixt number by an integer, reduce the mixt number into an improper fraction, whose denominator multiply by the integer for your divisor.

Divide $3\frac{3}{4}$ by 2

$$3\frac{3}{4} \div 2 \text{ or } 1\frac{15}{8} \text{ facit.}$$

R. 2

6. To divide a mixt number by a fraction, reduce the mixt number into an improper fraction, and work as before.

Example. Divide $3\frac{1}{2}$ by $3\frac{4}{7}$

$$\frac{7}{4}) \frac{23}{2} \left(\frac{103}{18} \text{ facit, or } 6\frac{11}{18}$$

7. To divide an integer by a mixt number, reduce the mixt number and integer into improper fractions and proceed as before.

Example. Divide 5 by $3\frac{1}{2}$

$$\frac{18}{7}) \frac{5}{1} \left(\frac{24}{7} \text{ facit} \right. \\ \text{Or, } 1\frac{7}{8} \text{ facit}$$

8. To divide a mixt number by a mixt number, reduce them into improper fractions, and divide as before.

Example. Divide $3\frac{1}{2}$ by $2\frac{1}{2}$

$$\text{Or, } \frac{18}{7} \text{ by } \frac{5}{2} \\ \text{Facit } \frac{71}{14} \text{ or } 5\frac{1}{2}$$

Division of Decimals is the same as in whole numbers till the work be done, and then use the converse of the rule for multiplication, viz. so many decimals as are in the dividend, so many there must be in the divisor and quotient; and if there be not so many, the quotient must be supplied with cyphers towards the left hand

Example. Divide 33,9521 by 2,87

$$\begin{array}{r} 2,87 \overline{) 525} \end{array}$$

$$\begin{array}{r} \underline{2382} \\ \text{Facit } 11,83 \text{ } 86 \end{array}$$

00

See the converse in multiplication of decimals.

The Rule of Three in Fractions;

RULE: You must multiply your second and third numbers together, and divide by the first, Observing the same method as in whole numbers, viz. That the first and third numbers be of one name or denomination.

Example. If $3\frac{1}{2}$ d buy $\frac{1}{2}$ lb of tobacco, What shall $96\frac{1}{2}$ d buy?

$$\begin{array}{r} \frac{1}{2} \text{ of } 740 \quad 1 \text{ lb } 1 \\ 3\frac{1}{2} - 2 - 95\frac{1}{2} \\ \hline 4\frac{1}{2} \text{ by } 2 \\ 740 \end{array}$$

Divide 740 by $2\frac{1}{2}$

$$\begin{array}{r} 7 \quad 766 \\ \hline 84 \quad 2880 \\ 2880 \\ \hline 3360 \end{array}$$

$84) 367680$

Facit 4377 lb of tobacco

$$\begin{array}{r} 316 \\ 648 \\ 600 \\ \hline 12.41 \end{array}$$



The Mensuration of plain Superficies (or flat Measure) such as Board, Glass, Wainscot, Painting, and the like.

Note 1. **T**HAT in superficial measure, 12 times 12 inches, being 144 inches, are the number of inches contained in a square foot of superficial measure.

R. 3.

2. That to square any number is to multiply it by itself, as if you would know how many square feet is contained in a yard square, multiply 3, the feet in one yard by 3, the product is 9, and so many feet make a yard square.

Example. How many square inches are there in a yard square.

1 yard is 3 feet

$$\begin{array}{r}
 12 \\
 \hline
 36 \text{ inch} \\
 36 \\
 \hline
 216 \\
 108 \\
 \hline
 \end{array}$$

Facit 1296 inch

The general rule is to multiply the length by the breadth. the product is the content.

Example. A board 12 feet long, and 14 inches broad, how many square feet?

$$\begin{array}{r}
 12 \\
 12 \\
 \hline
 144 \\
 14 \\
 \hline
 576 \\
 144 \\
 \hline
 \end{array}$$

144) 2016

576 Facit 14 square feet.

Example 2. A piece of wainscot 24 feet, 9 inches long and 11 feet deep, how many square yards?

Feet. & Inch.	Yard.	Feet. & Inch.
24 — 9	} Facit	30 — 3 — 3
11 Mul.		Or, 30 — 2 — 1½
9) 272 — 3		

Example. A painter hath done a room, 90 feet about, and 11½ feet high, I demand the square yards therein.

Feet
11,5 High
90 About

9) 1035 (115 yards for answer.

Note, This way 'tis done much truer and with fewer figures, and no charge to the memory.

Example. A glazier hath done a pane of glass of 5 feet 73, high, and 5 feet 54, broad, at 6 d the foot square.

Note, The glazier's foot divided into 10 parts, and every part into 10 parts more

5: 73
5: 54
2292
2864
2864

Facit, feet, 31,7442

A general rule to measure round or square pillars.

Multiply the length by the circumference of round pillars.

And for square pillars, add the sides or breadth together, and multiply the total by the length.

Example. A painter hath done a pillar of 6 feet 3 inches circumference, and 14 feet 9 inches long, I demand the square yards of painting?

MENSURATION.

The common and best way to do this, is by cross multiplication, thus,

Feet. Inch.

24—9

6—3

14—8

88—6

Facit, feet 92—2—3

Or, yards 10—2—2—3

Multiplying 9 by 3, gives 2 feet 3, put down the 3, and carry 2; then 3 times 14 is 42, and 2 is 44, which is 3 feet 8, which put down as you see.

Then 6 times 9 is 54, which is 5 feet 6, put 6 under the 8 (as being 12ths of a foot as the 8 is) then 6 times 12 is 84, and 4 is 88. So the sum of the 2 lines is 92 feet 2—3. Or the feet divided by 9, is 10 yards 2 feet, 2 primes (or 12ths of a foot) and 3 seconds or 12ths of a 12.

The same is done decimally thus:

14, 75 Feet.

6, 35

7375

2950

8850

9)92,1875

Or yards 10 2,1875 feet.

For regular polygons, add all the sides together, and multiply the total by half the nearest distance from the center to one of the sides.

For cones, multiply half the length by the circumference.

For pyramids, add all the breadth at the base together, and multiply half the length by the total.

For globes, multiply the area of the greatest circle by 4, it gives the content.

Mensuration of Solids.

Solids; such as stone, timber, &c. are measured by the cubic or solid foot; now a cube is a figure like a dye of 6 equal sides, and a cubic foot contains 12 inches square on every side.

THE rule is, multiply the length by the breadth, and that product multiplied by the depth, which divide by 1728, the cubic inches in a foot solid.

Example.

A piece of timber 16 foot long, 14 inches broad, and 9 inches deep, how many solid feet doth it contain?

$$\begin{array}{r}
 12 \quad 16 \\
 \times 14 \\
 \hline
 144 \quad 192 \\
 \times 9 \\
 \hline
 1728 \quad 768 \\
 \times 192 \\
 \hline
 2688 \\
 \times 9 \\
 \hline
 1728 \quad 24192 \text{ Facit } 14 \text{ Feet} \\
 \times 14 \\
 \hline
 000
 \end{array}$$

Example.

A stone 7 feet 3 inches long, 4 feet 5 inches broad, and 2 feet 3 inches deep, how many solid feet?

7—3 4—5 2—3
12 12 12

87 length 53 27
53 breadth

1261

435

1628)

124497

3537

4611

27 deep. Facit 72 solid feet

81

32277

9222

resta

1678

Or 6"—9"

Facit 124497 cubic inches

But the way most used, and which is shorter and most like an artist, is this.

Inch Feet

4—5 broad

2—3 deep

1—1—3

8—10—0

9—11—3

7—3—0 long

2—5—9—9

69—6—9

Feet 72—0—6—9

Only carrying the 12's both in your multiplication and addition.

To find how many inches in length make a solid foot of timber, multiply the number of inches square in itself for a divisor, and make 1728, the cubical inches of a foot your dividend.

MENSURATION.

203

Example.

A piece of timber 18 inches square, what length will it require to make a foot solid?

18

18

144

18

324) 1728

Facit 5 inches 108

Example.

How many inches in length will make a foot, at 12 inches square?

12

12

144) 1728

288

Facit 12 inch.

PLANK MEASURE.

A table shewing how many feet make a load of plank of any thickness.

Inch Foot to
thick the load

1 — 600

1½ — 400

2 — 300

2½ — 240

3 — 200

3½ — 171, 428

4 — 150

4½ — 133, 31

Inch Foot to
thick the load

5 — 120

5½ — 109, 0912

6 — 100

6½ — 92, 076

7 — 85, 714

7½ — 80

8 — 75

8½ — 70, 588

The way to make this table, or to know how many feet of plank make a load of any thickness.

Rule. Say, if 12 inches thick, require 50 feet to make a load: what will 4 inch thick require? This by the reverse rule of three, gives 150, as you see by the operation.

$$\begin{array}{r} 12. \quad 58 \quad 4. \quad 81 \\ \quad \quad 12 \quad \quad 81 \end{array}$$

4) 600 (150 feet for answer.

So that if you divide 600 by any thickness of plank, the quotient sheweth how many feet thereof make a load.

2 Ex. If it were required to know how many load are in 576 feet of plank 5 inches thick.

By the table 120 feet make a load; therefore divide 5762 by 120, and the quotient is loads.

$$120) 5762) 48\frac{2}{3} \text{ or } \frac{14}{3} \text{ loads.}$$

Or multiply the feet given by 144, and that product by the thickness of the plank, then divide by 1728 the inches in a solid foot, and the quote is feet, which divide by 50 the feet in a load, and you have the loads without the table.

$$\begin{array}{r} 5762 \\ 144 \\ \hline 829728 \\ 5 \end{array}$$

$$1728) 4148640) 2400 (48\frac{2}{3} \text{ load.}$$

$$6926 \quad 50)$$

$$1440$$

Note, The remainder $\frac{1}{3}440$ is equal to 56 feet, and $\frac{1}{3}$ of $\frac{1}{3}6$ is equal $\frac{1}{3}6$ of the load as above.

Example. In 1234 feet of 4 inches plank, how many load and solid feet?

$$150) 1234 (8 \text{ load.}$$

$$3) 34 (11 \text{ solid feet.}$$

For the solid feet, divide the remainder by the number of 50's contained in the divisor; or by the times that the thickness of the plank is found in 12 as above.

Also, if the last example were done by the second rule, under the second example, 1234 multiplied by

144, gives 177696, and that by 4 inches thick, 710784, which divided by 1728, the quote is 411 feet, or 8 load (divided by 50) and 11 feet as in the last rule and example.

3dly, To know how many feet of planks of any thickness make a tun. Say by the inverse rule of three, as 12 to 40, so the thickness to the answer.

$$\begin{array}{r} 12, \quad 40 \quad 4. \\ \hline 12. \end{array}$$

4) 480 (120 feet in the tun.

And to may you make a table of the feet of any thickness in a tun (as is before shewed for the load) by only dividing the 480, by the thickness of the plank.

So in thickness Feet make a tun

of 1 inch	—480
2	—240
3	—160
4	—120
5	—96
6	—80, &c.





A Short and Easy

M E T H O D

O F

B O O K - K E E P I N G .

I N S T R U C T I O N S .

Quest. **W**Hat is the first thing I must do, who design to keep my books of accompts after this method.

Answ. You must make an inventory; an example of which is at the end of these instructions.

Q How must I post the first part of this inventory.

A You must post it on your ledger, viz. merchandize, to the debit of that accompt.

Cash, to the debit of your cash book.

George Mason's debt, to the debit of his accompt.

Germain Bell's debt, to his debit also.

And for the whole sum (viz. 730l.) you must give counterpart in credit of stock.

Q How must I post the other part of this inventory.

A To the credit of Thos. Richards, the sum you owe him.

To the credit of John Fair, the sum you owe him.

And for the whole sum, (viz. 100l.) you must debit stock. See the several accompts, fol. 1, 2.

Q I see by the first page of the day-book, that it contains entries of goods sold to sundry persons: How must these be posted.

A To the debit of Richard Hughs, what sold him.

To debit of Anthony Coule, the like.

To debit of John Gray and company, the like.

To debit of Richard Hunt, the like. See their acc-
compts, Fol. 3. ledger.

And counterpart must be given for the whole sum of
this page (viz. 16l 10s 10d) on credit of merchandize
in the said ledger. See account of merchandize, Fol. 1.
ledger.

And the like must be done for the pages 2, 3, 4, 5,
and 6 of the said day-book.

Note, That the ready money taken for goods sold is
posted each month to the debit of your cash book.

Q How must I enter the monies I receive (of debtors
on my ledger.

A On your debit side of your cash book. See that
book.

Q How must I post those sums received into my
ledger.

A To the credits of the persons, of whom received,
See the accompts of

Richard Hughs — — — Fol. 3

Anthony Coule — — — Fol. 3

John Gray and company — Fol. 3

Thomas Wilson — — — Fol. 3

Henry Trap — — — Fol. 4

Q How must I post (into my ledger) the total receipts
of the month of August (viz. 57l 3s and 10d)

A You must post that total to the debit of your cash,
in your ledger, writing,

To sundries. Received per cash-book. See the ac-
count of cash in the ledger, Fol. 1.

Do the like for September and October's receipts.

Q How must I enter the monies I pay to those I owe
to, and who have credit in my ledger.

A On the credit side of your cash-book. See the
cash-book.

Q How must I post those sums paid.

A To the debits of the persons to whom paid. See
the accompts of Thomas Richards, Fol. 2. and John Fair,
Fol. 2. in your ledger.

Q How must I post (into my ledger) the total pay-
ments of the month of August (viz. 30l.)

A You must post it to the credit of your cash, in your ledger, writing,

By sundries paid per cash book. See the accompt of cash in your ledger, Fol. 1.

Q I understand by these directions, how to state and post my books, How must I proceed in balancing my ledger.

A Value your merchandize remaining unfold, and enter the sum of their value on credit of the accompt of merchandize, in your ledger. See the accompt of merchandize, Fol. 1.

And give the counterpart in debit of the account of balance in the said ledger. See the debit of balance, Fol. 1.

Which done, subtract the debit side of the said accompt of merchandize from its credit, and place the remainder (viz. 97^l 10s) on the debit side of it. See the accompt, Fol. 1.

And give counterpart on credit of profit and loss in the said ledger. See accompt of profit and loss, Fol. 4.

Then add up debtor and creditor to the accompt of cash in the said ledger, and subtract the credit from the debit, and place the cash remaining (viz. 297^l 7s 1d) on credit of the said accompt of cash. See the accompt, Fol. 1, and give counterpart in debit of the accompt of balance. See said accompt of balance, Fol. 4.

Q How must I do with the accompt of expences.

A Write on its credit side (the 32^l.) by profit and loss, and give counterpart in debit of the accompt of profit and loss. See both the accompts, Fol. 2, 4.

Q. How must I do with the accompt of George Mason, who I find by his accompt, owes me 10^l.

A You must write on credit of his accompt by balance now owing to me 10^l.

And give counterpart, on debit of balance. See both the accompts, Fol. 2, 4.

Do in the same manner by the accompts of

Germain Bell — Fol. 3

Richard Hughs — Fol. 3

John Gray and company Fol. 3

And Thomas Wilton — Fol. 3

See their particular accompts in your ledger.

Q How must I do with the accompt of Thomas Richards, to whom I find I owe 20l.

A You must write on the debit of his accompt. To balance now due to him 20l.

And give counterpart on credit of balance. See both the accompts, Fol. 2. 4.

Do the like with the accompt of John Fair. See his accompt, Fol. 2.

Q How must I do to balance or close the accompts of stock, profit and loss.

A Subtract the debit, or profit and loss from its credit, and set the remainder (viz. 65l 10s) being your clear gains during the time of this trade, on the debit of profit and loss. See the accompt, Fol. 4.

And give counterpart in credit of stock. See accompt of stock, Fol. 4.

Q How must I do to balance the accompt of stock:

A Subtract its debit from its credit, and set the remainder (viz. 685l 10s, being your present neat stock) on the debit of stock. See the accompt, Fol. 1.

And give counterpart in credit of balance. See accompt of balance, Fol. 4.

This done, your ledger is balanced, and the accompt of balance, Fol. 4.

This done, your ledger is balanced, and the accompt of balance (if you have proceeded right) will be equal on both sides.

The INVENTORY.

Lond. Aug. 1. 1762.

I Have merchandize of sundry }
sorts to the value of ——— L. 520—00—00

In cash or ready money ——— 180—00—00

Owing to me, by

Richard Mason ——— 20—00—00

Germain Bell ——— 10—00—00

Owing by me, to

Thomas Richards L. 60—00—00

John Fair ——— 50—00—00

————— L. 110—00—00

My neat stock 620—00—00

S 3

Cash-Book. T.

Receipts — Debtor.

l. s. d.

August, 1762.

1	To stock by inventory — — —	1	180	00	00
8	Richard Hughs, of him — — —	3	4	00	00
12	Anthony Coule, ditto — — —	3	3	6	06
16	John Gray and company, ditto	3	1	10	06
20	Thomas Willson, ditto — — —	3	4	13	00
30	Henry Trap, ditto — — —	4	0	15	00
pt. 31	Merchandize since 1st of August		42	18	10
	L. 57—03—10 Received		237	03	10

September, 1762.

	Last balance		207	03	10
11	Richard Hughs, of him — — —	3	8	15	11
—	Anthony Coule, ditto — — —	3	3	00	00
15	George Mafon, ditto — — —	2	10	00	00
20	Germain Bell, ditto — — —	2	5	00	00
24	Henry Trap, ditto — — —	4	2	06	00
30	John Gray and company, ditto —	3	2	00	03
—	Merchandize since 1st of September		38	06	06
	L. 69—18—08 Received		276	12	06

Book-Keeping.

211

I.

Payments ——— Creditor.

l. s. d.

August, 1762.

28 By Thomas Richards, to him ——— 2 20 00 00

31 John Fair, ditto ——— 2 10 00 00

Paid this month 30 00 00

Resting per balance 207 03 00

237 03 10

September, 1762.

22 John Fair, to him ——— 2 5 00 00

28 Thomas Richards, ditto ——— 2 10 00 00

Paid this month 15 00 00

Resting per balance 261 12 06

276 12 06

2.

Receipts ——— Creditor.

l. s. d.

October, 1762.

		Last balance	261	12	06
11	To Anthony Coule, of him	3	2	00	00
20	John Biddy, ditto	4	2	18	00
31	John Gray and company, ditto	3	5	15	03
pt.	Merchandize since 1st of October		86	11	04
	L. 97—04—07 Received		358	17	01

November, 1762.

Book-Keeping.

213

2.

Payments ——— Creditor.

l. s. d.

October, 1762.

15	By Thomas Richards, to him — —	2	10	00	00
28	John Fair, ditto — — — —	2	20	00	00
31	Expences, &c. since 1st of August	1	32	00	00
	Paid this month — — — —		62	00	00
	Resting per balance — — — —		296	17	01
			358	17	01

November, 1762.

DAY-BOOK,

JOURNAL.

Day-Book. I.

			l.	s.	d.
Accompts debtor to merchandize.					
Sold. August 1. 1762.					
3	Richard Hughs,				
	29½ ells linnen at	s. 3—2	6	05	01
	ditto				
3	Anthony Coule,				
	58½ ells linnen at	s. 2—4	6	16	06
	ditto 5				
3	John Gray and company,				
	3 doz. sciffars, at 4—0	l. 0—12—0			
	3 doz. ditto 3—9	0—11—3			
	5 doz. round points, at 3—9	1—02—6			
	6 doz. middling 2—8	0—16—0			
	ditto 10		3	01	09
3	Richard Hughs,				
	3 masses of pearl, at	l. 0—2—6	0	07	06
Merchandize fold—			16	10	10

Day-Book.

Accompts debtor to merchandize.

l. s. d.

Sold.

August 17. 1762.

3 Thomas Wilfon,

12 doz. scissars	4-3	l. 4-12-6
6 doz. middling	4-3	1-05-6
9 doz. ditto	2-8	1-04-0
20 doz small	1-6	1-10-0

8 12 00

ditto 20

3 Anthony Coule,

1 looking glass	—	l. 0-08-6
1 ditto middling	—	0-09-6
3 tortoise shell combs	—	0-06-0

1 04 00

ditto 23

4 Henry Trap,

1 doz. scissars with cases	—	l. 0-09-6
1 doz. without cases	—	0-05-0

0 15 00

Sold.

August 27. 1762.

3 Richard Hughs,

3 pair scissars half barb	—	l. 0-06-0
1 doz. ditto, small set	—	0-05-0
2 knives at 20d	—	0-03-4
1 doz. comb brushes	—	0-03-0
6 pen knives at 8d	—	0-04-0
12 doz. clasp knives	—	1-17-0
14 doz. knives horn handed	—	3-00-0

5 18 04

Merchandize sold—16 10 04

Day-Book. 3.

Accompts. debtor to merchandize.

l. s. d.

Sold.

August 31. 1762.

1	Receipts in ready money for goods since the 1st of August	42	18	10
---	--	----	----	----

September 3. 1762.

4	Henry Trap,			
3	A parcel of scissars	0	12	00

ditto 6

3	Richard Hughs,			
2	masses of pearl, at	s. 2-6	0	05 00

ditto 11

3	Richard Hughs,			
13	ells cloth, at	s. 2-6	1	12 06

ditto 15

3	Anthony Coule,			
4	masses pearl	2-6	l. 0-10-0	
1½	doz. pendants	4-6	0-06-6	0 16 00

ditto 16

4	Henry Trap,			
12	doz. horn trumpets, 2	l. 1-01-4		
2	doz. comb brushes, 3	0-06-0		
2	doz. ditto, 2	0-04-0		
			1	14 00

Merchandize sold	47	18	04
------------------	----	----	----

Book-Keeping.
Day-Book. 4.

217

Accompts debtor to merchandize

Sold.

September 30 1762.

4	John Biddy,					
	3 masses Ven. pearl, at	l.	1	00	0	
	2 doz. scissars at		0	09	0	
	13 doz. fine combs, at		1	09	0	
						2 18 00

ditto

3	John Gray and company,					
	1 piece white gauze qt. 24 ells					
	1 piece ditto 22					
	1 piece ditto 20					
	1 piece ditto 18					
	1 piece yellow ditto 20					
	1 piece black ditto 19					
	Ells 123 at 21 d					10 15 03

ditto

1	Receipts in ready money for goods since } the 1st of September					38 6 03
---	---	--	--	--	--	---------

October 2. 1762.

3	Thomas Wilson,					
	1 doz. scissars with cases, at	l.	0	12	0	
	4 masses pearl, at 2s		0	08	4	
	9 masses ditto, at		3	17	4	
						4 17 04

Merchandize sold—56 17 01

T

Day-Book.

5.

Accompts debtor to merchandize.

l. s. d.

Sold.

October 29. 1762.

Thomas Wilfon,

2 pieces tabby, qt. 61	}	l.	25	18	6
ells — 8s 6d					
1 piece ditto, qt. 28	}		11	17	6
ells — 8s 6d					

37 16 6

ditto 31

Receipts in ready money for goods since	}	86	11	04
the 1st of October				

Merchandize fold—124 07 10

THE LEDGER.

ALPHABET.

B		X	M	
Bell, Germain	2		Merchandize	1
Biddy, John	4		Mason, George	2
Balance	4			
C			P	
Coule, Anthony	3		Profit and loss	4
Cash	1			
E			R	
Expen. and abatem.	1		Rept. and paym. cash	1
			Richards, Thomas	2
F			S	
Fair, John	2		Stock	1
G			T	
Gray, John and com.	3		Trap, Henry	4
H			W	
Hughs, Richard	3		Wilson, Thomas	3

Book Keeping. Ledger. I.

				l. s. d.		
		Stock — Debtor.				
1762		To sundry to, whom I owe		4	110	00 00
Aug.	2	To balance N. stock		685	11	00
Oct.	31					
				795	11	00
		Merchandise, Debtor.				
1762		To stock per inventory		1	520	00 00
Aug.	1	To profit and loss, carried thither		4	97	10 00
Oct.	31					
				617	10	00
		Receipts or Cash, Debtor.				
1762		To stock, money per inventory		1	180	00 00
Aug.	1	To sundries per book, page 1			57	03 10
	31	To sundries			69	18 08
Sept.	30	To sundries			97	04 07
Oct.	31	To sundries				
				404	07	01
		Expences, &c. Debtor.				
1762		To payment hereon since 1 Aug.		1	31	19 00
Oct.	3					

Ledger. 1.

		Stock ——— Creditor.		l. s. d.		
1762	13	By fundry per inventory		4	730	00 00
Aug.	31	By profit and loss in 3 months			65	11 00
Oct.					795	11 00
		Merchandise, Creditor.				
1762	10	By sundries sold, day-book	1		16	10 10
Aug.	27	By sundries	2		16	10 04
	16	By sundries	3		47	18 04
Sept.	20	By sundries	4		56	17 01
Oct.	31	By sundries	5		124	07 10
		By bal. value of remains		4	262	14 05
					354	15 07
					617	10 00
		Payments or Cash, Creditor.				
1762	31	By sundries per book	1			
Aug.	30	By sundries	1		30	00 00
Sept.	31	By sundries	1		15	00 00
Oct.					62	00 00
		By balance, rest in cash	1	4	107	00 00
					297	07 01
					404	07 01
		Expences, &c. Creditor.				
1762	31	By profit and loss carried there		4	31	19 00

Book-Keeping. Ledger. 2.

				l.	s.	d.
1762	George Mason, Debtor.					
Aug	1	To stock, now owing me	1	20	00	00
1762	Germain Bell, Debtor.					
Aug	1	To stock, due to me	1	10	00	00
1762	Thomas Richards, Debtor.					
Aug	23	To payment, to him	1	20	00	00
Sept	28	To ditto	1	10	00	00
Oct	25	To ditto	1	10	00	00
To balance now due to him					40	00 00
					20	00 00
					60	00 00
1762	John Fair, Debtor.					
Aug	31	To payment, to him	1	10	00	00
Sept	23	To ditto	1	5	00	00
Oct	28	To ditto	1	20	00	00
To balance now owing him				4	35	00 00
					15	00 00
					50	00 00

Book-Keeping. Ledger. 2.

223

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1762
Sept.
Oct.

15
31

George Mason, Creditor.
By receipt of him
By balance now owing to me

10
4

10 00 00
10 50 00
20 00 00

1762
Sept
Oct.

20
31

Germain Bell, Creditor.
By receipt of him
By balance now owing me

1
4

5 00 00
5 00 00
10 00 00

1762
Aug.

1

Thomas Richards, Creditor.
By stock now owing him

1

60 00 00

1762
Aug.

1

John Fair, Creditor.
By stock now due to him

1

50 00 00

Ledger. 3.

		l. s. d.	
Richard Hughs, Debtor.			
1762	1	To merchandize sold	6 05 01
Aug.	10	To ditto	0 07 06
	27	To ditto, a parcel	5 18 04
	6	To ditto, 3 masses of pearl	0 5 00
Sept.	11	To ditto, 13 ells of cloth	1 12 00
			14 08 05
Anthony Coule, Debtor.			
1762	5	To merchandize sold him	6 16 06
Aug.	20	To ditto, a parcel	1 04 00
Sept.	15	To ditto, a parcel	0 16 00
			8 16 06
John Gray and comp. Debtor.			
1762	5	To merchandize, a parcel	3 01 09
Aug.	30	To ditto, a parcel	10 15 03
Sept.			13 17 00
Thomas Wilfon, Debtor.			
1762	17	To merchandize, a parcel	8 13 00
Aug.	2	To ditto, a parcel	4 17 04
Oct.	29	To ditto, a parcel	37 16 06
			51 06 10

Book-Keeping.
Ledger. 3.

225

			l.	s.	d.
1762		Richard Hughs, Creditor.			
Aug. 18		By receipt of him	1	4	00 00
Sept. 11		By ditto	1	8	15 11
				12	15 11
		By balance now owing me	4	1	12 6
				8	5
1762		Anthony Coule, Creditor.			
Aug. 12		By receipt of him	1	3	06 6
Sept. 11		By ditto	1	3	00 00
Oct. 11		By ditto	1	2	00 00
		Balance			10 00
				8	16 6
1762		John Gray and comp. Creditor.			
Aug. 16		By receipt of them	1	1	10 6
Sept. 30		By ditto	1	2	00 3
Oct. 31		By ditto	1	5	15 3
				9	06 00
		By balance now owing me	4	4	11 00
				13	17 00
1762		Thomas Wilson, Creditor.			
Aug. 20		By receipt of him	1	4	13 00
Oct. 31		By balance now owing me	4	46	13 10
				51	06 10

Ledger. 4.

		l.	s.	d.
	Henry Trap, Debtor.			
1762 Aug. Sept.	To merchandize, a parcel _____ To ditto _____ To ditto _____	I I I	C C I	5 00 12 00 13 00
				— — — 3 00 00
	John Biddy, Debtor.			
1762 Sept.	To merchandize, a parcel _____	1	2	18 00
				— — —
	Profit and loss, Debtor.			
Oft.	To expences, &c. brought here ———	2	31	19 00
	To stock gained since Aug. 1st — ——	1	65	11 00
				— — — 97 10 00
	Balance, Debtor.			
1762 Oft.	To merchandize now remaining _____	1	354	16 7
	To receipts, or cash resting _____	1	297	17 1
	To George Mason; now owing _____	2	10	00 00
	To Germain Bell, ditto _____	2	5	00 00
	To Richard Hughs, ditto _____	3	1	12 6
	To John Gray and comp. ditto _____	3	4	11 00
	To Thomas Wilson, ditto _____	3	46	13 00
	To Anthony Coule, ditto _____	3	00	10 10
				— — — 729 11 00

Book-Keeping.
Ledger. 4.

227

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3 co

9 00
1 00
0 00

6 7
7 1
0 00
0 00
2 6
1 00
3 00
0 10
1 00

1762 Henry Trap, Creditor.

Aug. 30 By receipt of him

Sept. 24 By ditto in full

l. s. d.

I 0 15 00

I 2 06 00

3 01 00

1762 John Biddy, Creditor.

Oct. 20 By receipt in full

I 2 18 00

1762 Profit and loss, Creditor.

Oct. 31 By merch. to close that accompt

I 97 10 00

Balance, Creditor.

1762 By Thomas Richards, I owe him

Oct. 31 By John Fair, ditto

2 20 00 00

2 15 00 00

35 00 00

By stock, for its neat

I 685 11 00

720 11 00

Directions for Book-Keeping.

Quest. **H**AVING taught me how to state, post, and balance my books, what method must I use at the going out of these books into others?

Ans. From the balance of these books (see ledger, fol. 4) you must draw out another inventory, as follows:

The INVENTORY.

London, October 31. 1762.

I Have in merchandize of sundry } L. 354 16 07
 sorts, to the value of }
 In cash or ready money ——— 297 07 01

Owing to me, by

George Mafon	—	—	—	10	00	00
Germain Bell	—	—	—	5	00	00
Richard Hughs	—	—	—	5	12	06
John Gray and company	—	—	—	4	11	00
Thomas Wilson	—	—	—	46	13	00
Anthony Coule	—	—	—	00	10	00
				720	11	00

Owing by me, to

Thomas Richards	L. 20	00	00
John Fair	—	15	00 00
		35	00 00
My neat stock	685	11	00

And post it into your new ledger, as by the directions given for the posting your other inventory.

Q. In the cash book, on debtor side (for instance in the month of August) are figures just before the money lines, as 1 before 180l. and 3 before 4l. &c. I desire to know what those figures shew.

A The figure 1 (before 180*l.* in the first line) shews the folio of the ledger, on which the accompt of stock stands.

The figure 3 following Richard Hughs, in the next line, shews the folio of the ledger, whereon the accompt of Richard Hughs stands.

The like is to be understood of the figure 3 following Anthony Coule: the 3 following John Gray and company: the 3 following Thomas Wilson, and the 4 following Henry Trap, on debtor side of the said cash-book for the month of August, and of those on debtor side, of the said book for the months of September and October.

Q What do the figures (on the creditor side of the said cash book) which come just before the money lines shew? For instance, in the month of August on creditor side, of the figure 2 following Thomas Richards just before the 20*l.* and the 2 following John Fair, just before 10*l.*

A The figure 2 following Thomas Richards, shews that his accompt stands in ledger, folio 2. And the 2 following John Fair, shews that his accompt stands also in the said ledger, folio 2.

The like is to be understood of the figures 2, 2 on creditor side of the cash book for September.

And of the figures 2, 2, 2 on creditor side of the cash book for October.

Q What does the *L.* 57 : 3 : 10, at the foot of the debtor side of the cash book for the month of August, shew.

A It shews the total sum received during the month of August, and is produced by subtracting the 180 *l.* in the first line from the *L.* 237 : 3 : 10. on the debtor of that accompt.

The like is to be understood of the *L.* 69 : 18 : 8, at the foot of September, and of the *L.* 97 : 8 : 7, at the foot of October.

And as those sums shew the total receipt during each month, so the sum 30 *l.* on credit side of the cash book for August, the sum of 15 *l.* for September, and the 62 *l.* for October, shew the total payment during each of those months.

Q How is the balance (or rest of money) in cash found.

A You must subtract the 30 l (on credit of August's cash book) from the L. 237 : 10, on the debit side, and the remainder being L. 207 : 3 : 10, and balance, or rest of money, in cash, which placed under the 30 l paid, and added to it, makes a just balance with the debtor side. See the cash book for the month of August.

You are to do in the like manner to find the balance, or rests of cash for the months of September and October. See the cash book for these months.

Q What does figure 3 against Richard Hughs (in the day book) and the 3 against anthony Coule, and the other figures in the margin of the day book shew.

A They shew the folios of the ledger whereon the accompt of Richard Hughs, Anthony Coule, and the other accompts stand.

And also shew that these persons or accompts are debtors; as the figure 1 under the small line of the margin, and at the foot of each page of the day book, just against the words merchandize sold, shews that the accompt of merchandize stands in the ledger, on folio 2, and is creditor.

Q What do the figures in the ledger coming just before the money lines on debtor side, shew.

A As the words of each line on the debtor side of said ledger, immediately following the word to, shews what accompts or persons are to be credited, or counterparted, so those figures shew on what folios in the ledger those accompts or persons are to be found.

Q What does the figures coming just before the money lines on the creditor side of the ledger shew.

A As the words in each line on creditors side of the said ledger immediately following the word by, shews what accompts or persons are debited or counterparted, so those figures shew on what folios in the ledger those accompts or persons are to be found.

Q How must I enter the goods I buy.

A You must enter them in a bought book: as for instance,

Merchandize debtor to persons.

Bought

Of (suppose) Richard Thomas, viz.

56 ells linnen, at 3s } L. 6-18-0
per ell - - - }

52 ells ditto, at 4s } 10-08-0
per ell - - - }

————— L. 17-6-0

This article (and others of the like nature) must be posted in your ledger, to the credit of the account of the persons of whom bought, here Richard Thomas: and in the said ledger to the debit of account of merchandize.

I have been told that a good method of book-keeping will shew the owner of the books, or others concerned, these following necessary (and many other) particulars, viz.

Concerning merchandize.

No 1. What goods (during the whole, or any time of the account) have been bought, brought into charge, when, of whom, and at what prices.

2. What goods (as above) have been sold, issued out of the charge, when, to whom, and at what price.

3. The whole quantity bought and sold, and the profit, or loss, arising on those so disposed of.

Concerning cash or money.

4. What sums of money have been received (as above) to whom, and on whose account. Also whether in part or in full.

5. What sum total has been received and paid (during the whole) or during any time as above, and consequently the sum resting in cash.

Concerning persons with whom I deal.

6. For what sums they stand indebted, from what dates, and for what.

7. For what sums I stand indebted to them, from what dates, and for what.

8. Whether any balance, or remainder, be due from them to me, or from me to them, and what sum.

Concerning my expences.

9. What expence I have been at (during the time of the accompt, or any part of it) and such expence considered and allowed; then what neat gain or loss has attended.

Concerning my stock.

10. What stock I began with, and what my present stock is, and what particulars composeth each.

Now I desire you to shew me how this method will answer all these particulars.

A Concerning merchandize, your bought book will shew you the particular demands of numb. 1.

And your day book those in numb. 2.

The debtor side of accompt of merchandize in your ledger will shew the whole quantity bought, and its creditor side the whole quantity sold, and the same accompt shews you also the profit and loss arising on those you have disposed of. See the accompt of merchandize in ledger, folio 1, thus the demands of number 3, are shewn.

Concerning cash or money, the debtor side of your cash book answers the demands in number 4. and the creditor side of the said book shews the demands in number 5, and consequently those in number 6. by comparing the debtor and creditor sides.

The creditor side also of the said book, shews the balance (or rest that should be found) in cash.

Concerning persons with whom you deal.

The debtor sides of their accompts shew the demands of number 6. and creditor sides those of number 7.

And consequently their accompts compared in debtor and creditor, shew the demands of number 8.

Concerning your expences.

The accompt of expences in your ledger shews your expences, as in number 9. and the accompt of profit and loss, will shew the neat gain or loss.

Concerning your stock.

The accompt of stock in your ledger shews what you began with, and the accompt of balance shews your present stock, and of what particulars it consists, and answers the demands in number 10.

The Price of the Commodity by the Tun, Hundred-
Pound, Ounce, Dozen, Yard, Ell, &c.

Numb.	1 Farthing.				2 Farthings.				3 Farthings.			
	l	s.	d	q.	l	s.	d	q.	l	s.	d	q.
1	0	0	0	1	0	0	0	2	0	0	0	3
2	0	0	0	2	0	0	1	0	0	0	1	2
3	0	0	0	3	0	0	1	2	0	0	2	1
4	0	0	1	0	0	0	2	0	0	0	3	0
5	0	0	1	1	0	0	2	2	0	0	3	3
6	0	0	1	2	0	0	3	0	0	0	4	2
7	0	0	1	2	0	0	3	2	0	0	5	1
8	0	0	2	0	0	0	4	0	0	0	6	0
9	0	0	2	1	0	0	4	2	0	0	6	3
10	0	0	2	2	0	0	5	0	0	0	7	2
20	0	0	5	0	0	0	10	0	0	1	3	0
30	0	0	7	2	0	1	3	0	0	1	10	2
40	0	0	10	0	0	1	8	0	0	2	6	0
50	0	1	0	2	0	2	1	0	0	3	1	2
60	0	1	3	0	0	2	6	0	0	3	9	0
70	0	1	5	2	0	2	11	0	0	4	4	2
80	0	1	8	0	0	3	4	0	0	5	0	0
90	0	1	10	2	0	3	9	0	0	5	7	2
100	0	2	1	0	0	4	2	0	0	6	2	0
200	0	4	2	0	0	8	4	0	0	12	6	0
300	0	6	3	0	0	12	6	0	0	18	9	0
400	0	8	4	0	0	16	8	0	1	5	0	0
500	0	10	5	0	1	0	10	0	1	11	3	0
600	0	12	6	0	1	5	0	0	1	17	6	0
700	0	14	7	0	1	9	2	0	2	3	9	0
800	0	16	8	0	1	13	4	0	2	10	0	0
900	0	18	9	0	1	17	6	0	2	16	3	0
1000	1	0	10	0	2	1	8	0	3	2	6	0
2000	2	1	8	0	4	3	4	0	6	5	0	0
3000	3	2	6	0	6	5	0	0	9	7	6	0
4000	4	3	4	0	8	6	8	0	12	10	0	0
5000	5	4	2	0	10	8	4	0	15	12	6	0
10000	10	8	4	0	20	16	0	0	31	4	0	0

The Price of the Commodity by the Tun, Hundred,
Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	1 Penny.			2 Pence.			3 Pence.		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	1	0	0	2	0	0	3
2	0	0	2	0	0	4	0	0	6
3	0	0	3	0	0	6	0	0	9
4	0	0	4	0	0	8	0	1	0
5	0	0	5	0	0	10	0	1	3
6	0	0	6	0	1	0	0	1	6
7	0	0	7	0	1	2	0	1	9
8	0	0	8	0	1	4	0	2	0
9	0	0	9	0	1	6	0	2	3
10	0	0	10	0	1	8	0	2	6
20	0	1	8	0	3	4	0	5	0
30	0	2	6	0	5	0	0	7	6
40	0	3	4	0	6	8	0	10	0
50	0	4	2	0	8	4	0	12	6
60	0	5	0	0	10	0	0	15	0
70	0	5	10	0	11	8	0	17	6
80	0	6	8	0	13	4	1	0	0
90	0	7	6	0	15	0	1	2	6
100	0	8	4	0	16	8	1	5	0
200	0	16	8	1	13	4	2	10	0
300	1	5	0	2	10	0	3	15	0
400	1	13	4	3	6	8	5	0	0
500	2	1	8	4	3	4	6	5	0
600	2	10	0	5	0	0	7	10	0
700	2	18	4	5	16	8	8	15	0
800	3	6	8	6	13	4	10	0	0
900	3	15	0	7	10	0	11	5	0
1000	4	3	4	8	6	8	12	10	0
2000	8	6	8	16	13	4	25	0	0
3000	12	10	0	25	0	0	37	10	0
4000	16	13	4	33	6	8	50	0	0
5000	20	16	8	41	13	4	62	10	0
10000	41	12	4	83	6	0	125	0	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	4 Pence.			5 Pence.			6 Pence.		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	4	0	0	5	0	0	6
2	0	0	8	0	0	10	0	1	0
3	0	1	0	0	1	3	0	1	6
4	0	1	4	0	1	8	0	2	0
5	0	1	8	0	2	1	0	2	6
6	0	2	0	0	2	6	0	3	0
7	0	2	4	0	2	11	0	3	6
8	0	2	8	0	3	4	0	4	0
9	0	3	0	0	3	9	0	4	6
10	0	3	4	0	4	2	0	5	0
20	0	6	8	0	8	4	0	10	0
30	0	10	0	0	12	6	0	15	0
40	0	13	4	0	16	8	1	0	0
50	0	16	8	1	0	10	1	5	0
60	1	0	0	1	5	0	1	10	0
70	1	3	4	1	9	2	1	15	0
80	1	6	8	1	13	4	2	0	0
90	1	10	0	1	17	6	2	5	0
100	1	13	4	2	1	8	2	10	0
200	3	6	8	4	3	4	5	0	0
300	5	0	0	6	5	0	7	10	0
400	6	13	4	8	6	8	10	0	0
500	8	6	8	10	8	4	12	10	0
600	10	0	0	12	10	0	15	0	0
700	11	13	4	14	11	8	17	10	0
800	13	6	8	16	13	4	20	0	0
900	15	0	0	18	15	0	22	10	0
1000	16	13	4	20	16	8	25	0	0
2000	23	6	8	41	13	4	50	0	0
3000	50	0	0	62	10	0	75	0	0
4000	66	13	4	83	6	8	100	0	0
5000	83	6	8	104	3	4	125	0	0
10000	166	33	4	208	6	8	250	0	0

The Price of the Commodity by the Tuz, Hundred,
Pound, Ounce, Dozen, Yard, Ell, &c.

Numb.	7 Pence.			8 Pence.			9 Pence.		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	7	0	0	8	0	0	9
2	0	1	2	0	1	4	0	1	6
3	0	1	9	0	2	0	0	2	3
4	0	2	4	0	2	8	0	3	0
5	0	2	11	0	3	4	0	3	9
6	0	3	7	0	4	0	0	4	6
7	0	4	1	0	4	8	0	5	9
8	0	4	8	0	5	4	0	6	3
9	0	5	3	0	6	0	0	6	0
10	0	5	10	0	6	8	0	7	6
20	0	11	8	0	13	4	0	15	0
30	0	17	6	1	0	0	1	2	6
40	1	3	4	1	6	8	1	10	0
50	1	9	2	1	13	4	1	17	6
60	1	15	0	2	0	0	2	5	0
70	2	0	10	2	6	8	2	12	6
80	2	6	8	2	13	4	3	6	0
90	2	12	6	3	0	0	3	7	6
100	2	18	4	3	6	8	3	15	0
200	5	16	8	9	13	4	1	10	0
300	8	15	0	10	0	0	1	5	0
400	11	13	4	13	6	8	15	0	0
500	14	11	8	16	13	4	18	15	0
600	17	10	0	20	0	0	22	0	0
700	20	8	4	23	6	8	26	5	0
800	23	6	8	26	13	4	30	0	0
900	26	5	0	30	0	0	33	5	0
1000	29	3	4	33	6	8	37	10	0
2000	58	6	8	66	13	4	75	0	0
3000	80	10	0	100	0	0	22	10	0
4000	116	13	4	133	6	8	50	0	0
5000	145	16	8	166	13	4	87	10	0
10000	291	13	0	333	6	0	375	0	0

The Quantity of the Commodity to be bought or sold.

Accompts ready call up.

237

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numb.	10 Pence.			11 Pence.		
	l.	s.	d.	l.	s.	d.
1	0	0	10	0	0	11
2	0	1	8	0	1	10
3	0	2	6	0	2	9
4	0	3	4	0	3	8
5	0	4	2	0	4	7
6	0	5	0	0	5	6
7	0	5	10	0	6	5
8	0	6	8	0	7	4
9	0	7	6	0	8	3
10	0	8	4	0	9	2
20	0	16	8	1	0	18
30	1	5	0	1	7	6
40	1	13	4	1	16	8
50	2	1	8	2	5	10
60	2	10	0	2	15	0
70	2	18	4	3	4	2
80	3	6	8	3	13	4
90	3	15	0	4	2	6
100	4	3	4	4	11	8
200	8	6	8	9	3	4
300	12	10	0	13	15	0
400	16	13	4	18	6	8
500	20	16	8	22	18	4
600	25	0	0	27	10	0
700	29	3	4	32	1	8
800	33	6	8	36	13	4
900	37	10	0	41	5	0
1000	41	13	4	45	16	8
2000	83	6	8	91	3	4
3000	125	0	0	137	10	0
4000	166	13	4	183	6	8
5000	208	6	8	229	3	4
10000	417	13	4	458	6	8

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numt. 1 Shilling. 2 Shillings. 3 Shillings.

The Quantity of the Commodity to be bought or sold.

		l.	s.	l.	s.	l.	s.
1	0	0	1	0	0	2	0
2	0	0	2	0	0	4	0
3	0	0	3	0	0	6	0
4	0	0	4	0	0	8	0
5	0	0	5	0	0	10	0
6	0	0	6	0	0	12	0
7	0	0	7	0	0	14	0
8	0	0	8	0	0	16	0
9	0	0	9	0	0	18	0
10	0	0	10	0	0	20	0
20	0	1	0	0	2	0	0
30	0	1	0	0	3	0	0
40	0	2	0	0	4	0	0
50	0	2	0	0	5	0	0
60	0	3	0	0	6	0	0
70	0	3	0	0	7	0	0
80	0	4	0	0	8	0	0
90	0	4	0	0	9	0	0
100	0	5	0	0	10	0	0
200	0	10	0	0	20	0	0
300	0	15	0	0	30	0	0
400	0	20	0	0	40	0	0
500	0	25	0	0	50	0	0
600	0	30	0	0	60	0	0
700	0	35	0	0	70	0	0
800	0	40	0	0	80	0	0
900	0	45	0	0	90	0	0
1000	0	50	0	0	100	0	0
2000	0	100	0	0	200	0	0
3000	0	150	0	0	300	0	0
4000	0	200	0	0	400	0	0
5000	0	250	0	0	500	0	0
10000	0	500	0	0	1000	0	0

Accompts ready cast up.

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The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numb. 4 Shillings. 5 Shillings. 6 Shillings.

The Quantity of the Commodity to be bought or sold.

	1.	s. l.	s. l.	s.
1	0	4	0	5
2	0	8	0	10
3	0	12	0	15
4	0	16	1	0
5	1	0	1	5
6	1	4	1	10
7	1	8	1	15
8	1	12	2	0
9	1	16	2	5
10	2	0	2	10
20	4	0	5	0
30	6	0	7	10
40	8	0	10	0
50	10	0	12	10
60	12	0	15	0
70	14	0	17	10
80	16	0	20	0
90	18	0	22	10
100	20	0	25	0
200	40	0	50	0
300	60	0	75	0
400	80	0	100	0
500	100	0	125	0
600	120	0	150	0
700	140	0	175	0
800	160	0	200	0
900	180	0	225	0
1000	200	0	250	0
2000	400	0	500	0
3000	600	0	750	0
4000	800	0	1000	0
5000	1000	0	1250	0
6000	1200	0	1500	0
7000	1400	0	1750	0
8000	1600	0	2000	0
9000	1800	0	2250	0
10000	2000	0	2500	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numb. 7 Shillings 8 Shillings 9 Shillings 10 Shil.

The Quantity of the Commodity to be bought or sold.

	l.	s. l.	s. l.	s. l.	s.
1	0	7	0	8	0
2	0	14	0	16	0
3	1	1	1	4	1
4	1	8	1	12	1
5	1	15	2	0	2
6	2	2	2	8	2
7	2	9	2	16	3
8	2	16	3	4	3
9	3	3	3	12	4
10	3	10	4	0	4
20	7	0	8	0	9
30	10	10	12	0	13
40	14	0	16	0	18
50	17	10	20	0	22
60	21	0	24	0	27
70	24	10	28	0	31
80	28	0	32	0	36
90	31	10	36	0	40
100	35	0	40	0	45
200	70	0	80	0	90
300	105	0	120	0	135
400	140	0	160	0	180
500	175	0	200	0	225
600	210	0	240	0	270
700	245	0	280	0	315
800	280	0	320	0	360
900	315	0	360	0	405
1000	350	0	400	0	450
2000	700	0	800	0	900
3000	1050	0	1200	0	1350
4000	1400	0	1600	0	1800
5000	1750	0	2000	0	2250
10000	3500	0	4000	0	4500

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

No.	1 Lib.	2 Lib.	3 Lib.	4 Lib.	5 Lib.
	1.	1.	1.	1.	1.
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
6	6	12	18	24	30
7	7	14	21	28	35
8	8	16	24	32	40
9	9	18	27	36	45
10	10	20	30	40	50
20	20	40	60	80	100
30	30	60	90	120	150
40	40	80	120	160	200
50	50	100	150	200	250
60	60	120	180	240	300
70	70	140	210	280	350
80	80	160	240	320	400
90	90	180	270	360	450
100	100	200	300	400	500
200	200	400	600	800	1000
300	300	600	900	1200	1500
400	400	800	1200	1600	2000
500	500	1000	1500	2000	2500
600	600	1200	1800	2400	3000
700	700	1400	2100	2800	3500
800	800	1600	2400	3200	4000
900	900	1800	2700	3600	4500
1000	1000	2000	3000	4000	5000
2000	2000	4000	6000	8000	10000
3000	3000	6000	9000	12000	15000
4000	4000	8000	12000	16000	20000
5000	5000	10000	15000	20000	25000
10000	10000	20000	30000	40000	50000

The Quantity of the Commodity to be bought or sold.

The use of the foregoing Tables.

These tables will serve for many uses; but that which they'll be most used about, as being most necessary, is to find out the true account of any number of ells, yards, or pounds, being sold for so much the ell, yard, or pound.

Example. What will 5000 ells of linnen, at 11 pence the ell come to? To find this, first look to the price of the ell at the head of the table, then look down the side of the table for the number of ells, so you shall find in the last column but one in the table, and in the last line but one thereof that 5000 of any thing at 11 pence a piece, comes to 229l. 3s. 4d.

If you cannot find your price in one column, or number of things in one line, you must take two or three parts thereof, and add them together.

Another Example.

What will 1500 ells, at $9\frac{1}{2}$ come to?
In the table of nine pences you find,

	l.	s.	d.
For 1000 nine pences	37	10	0
For 500 nine pences	18	15	0
In the table of half pence,			
For 1000 half pence	2	1	8
For 500 half pence	1	0	10
	59	7	6

A Compleat

Compendium of GEOGRAPHY,

Describing all the

Empires, Kingdoms and Dominions
in the whole WORLD.

Shewing their situation, dimensions, religions,
languages, Commodities, divisions, moun-
tains, lakes, &c.

A method for learning geography without a
master, for the use of such grown persons
as have neglected this useful study in their
youth.

A table shewing the parallel of latitude, the
breadth, and length of the day in every
climate.

In a most plain and easy method.

To learn Geography without the Directions of a Master,

THE person who desires to learn geography must have a set of maps, and after reading over the situation of each empire, &c. he should be very exact in finding out in the map, the several places mentioned therein; and thus by reading each article several times over, and comparing them with the maps, any grown person may soon know the most remarkable places in the world, their situation, boundaries, &c. and will insensibly by degrees remember the names of them.

The following maps, which may be purchased at a small expence may be sufficient to instruct any reader, and render this treatise easy and intelligible, viz.

The World, Europe, Asia, Africa, North America, South America, England, Scotland and Ireland.

'Tis highly necessary, that the different parts of each of those maps should be distinguished by different colours, or at least by points or lines.

A Table shewing the Parallel of Latitude, the Breadth, and the Length of the Day in every Climate.

Climates	Climates betwixt the Equator and the Polar Circles.						
	Parall	Bdth	Day.	Clim	Parall	Bdth	Day.
	D. M.	D. M.	H. M.		D. M.	D. M.	H. M.
1	8 34	8 34	12 30	13	59 59	1 33	18 30
2	6 43	8 09	13 00	14	62 18	1 19	19 00
3	24 11	7 28	13 30	15	62 25	1 07	19 30
4	30 47	6 36	14 00	16	63 23	0 52	20 00
5	36 30	5 41	14 30	17	64 16	0 53	20 30
6	41 22	4 52	15 00	18	64 55	0 39	21 00
7	45 29	4 07	15 30	19	65 25	0 30	21 30
8	49 01	3 32	16 00	20	65 47	0 22	22 00
9	51 58	2 57	16 30	21	66 06	0 19	22 30
10	54 29	2 31	17 00	22	66 20	0 14	23 00
11	56 37	2 12	17 30	23	66 28	0 08	23 30
12	58 26	1 49	18 00	24	66 31	0 03	24 00
Climates between the Polar Circles and the Poles.							
1	67 31	1 00	1 Mo.	4	78 20	4 00	4 Mo.
2	69 31	2 00	2 Mo.	5	84 00	5 40	5 Mo.
3	73 21	3 50	3 Mo.	6	90 00	6 00	6 Mo.

Description of the World.

Geography is a science which teacheth the description of the earth. It differs from Cosmography as a part from the whole, and from Chronography and Topography as the whole from its parts.

The earth is a spherical body, which together with the water make up one globe of so perfect and exact a form, and so beautified and adorned by the God of nature, that from its elegancy and beauty, it was called by the Greeks *Kόσμος*; and by the Latins *Mundus*.

It is situate according to Ptolomy and Tycho, in the center of the universe, but according to Copernicus, between the orbs of Mars and Venus; its substance so wonderful, as may well express that unlimited power that performs infinitely beyond our imaginations.

As to its magnitude, it is 21600 miles in circuit, (allowing, according to the vulgar account 60 to a degree), its diameter 6874 miles; its semidiameter 3436; its superficies in square miles 148510584, and its solidity content 169921796242 cubical miles.

For the better understanding all its parts, it may be divided into four general heads, viz. 1. Its imaginary parts; 2. its real parts; 3. in respect to its inhabitants; and, 4. its national parts.

1. Imaginary Parts.

The imaginary parts are only supposed, for the clearer understanding of this science; they are, 1. Poles, 2. Circles, 3. Zones, and, 4. Climates.

1. The poles are the extream points of the axis, which are supposed to pass through the center of the earth, and on which it is supposed to move daily about. They answer to the poles of the heavens (as the other imaginary parts) being the farthest distant from the Equator; in number two, viz. 1. The arctick, or north pole; and, 2 The antarctick or, south pole.

2. The circles are divided into the greater and lesser: the greater divide the world into two equal parts: number four, viz. 1. The equator, compassing the earth equally between, and farthest from the poles; when the sun is here, the days and nights are equal. 2. The Zodiac (in which is the Ecliptic) cutting the Equator obliquely, through which the sun passes in a year. These two are immoveable. 3. The horizon, dividing the visible parts of the heavens from the invisible. 4. The Meridian, dividing the horizon into two equal parts: when the sun is here it is noon. These two are moveable.

The lesser circles divide the world into two unequal parts; they are, 1. The Tropics, which terminate the sun's distance from the equator, being 23 degrees and a half from it: when the sun is here it is either summer or winter. They are two, viz. of Cancer on the north, and of Capricorn on the south side of the equator. 2. The polar Circles, 66 degrees and one half of the Equator, and 23 and one half of the Poles; they are called the Arctic and Antarctic circles. 3. The Parallels, which are parallel to the Equator, set in maps to shew the latitude, as the meridian lines are to shew the longitude of places. (Note, That the latitude is the distance from the equator, and longitude from the first meridian, made commonly at the Canary isles.

3. The Zones are certain spaces of earth included between two lesser circles. In number five; viz. one torrid Zone, which lies between the tropics: two temperate Zones, between the tropics and polar circles; and two frigid Zones, between the polar circles and the poles.

4. A Clime, or Climate, is a space of earth, between two parallels, in which the longest day is increased half an hour; as for example, in the first Clime, the longest

day in 12 hours and a half; in the second 13 hours; in the third, 13 hours and a half, &c. they are in number 24 that is from the equator to the polar circles.

2. Real Parts.

The real parts are such as have a real existence upon the superficies of the earth, divided into, 1. Water, and, 2. Land.

1. Water is divided into, 1. Ocean, called a general collection or rendezvous of all waters, giving bounds to the regions of the earth. 2. Sea, a part of the ocean encompassed with land, except one streight, such as the Mediterranean and Baltic. 3. Streight, a part of the ocean, restrained into narrow bounds, opening the way to a sea, as those of Magalonica and Gibraltar. 4. Lake, a large space of water, wholly encompassed with land, as Parima and Zair. 5. Creek or Gulf, a crooked shore, thrusting forth as it were two arms to hold the sea, as those of Venice and Lepanto; as for Rivers, Ditches, Brooks, Fountains, &c. they need no description.

2. Land, dividid into, 1. Continent, a vast tract of land where many nations are joined together, as Europe, Asia, &c. 2. Island, a space of land wholly encompassed with sea, as Britain, Japan, &c. 3. Peninsula, a space of land encompassed with sea except one small part, as Morea, Malacca, &c. 4. Isthmus is that space of land that joins a peninsula to a continent. 5. Promontory, a mountain shooting itself into the sea, the end of which is called a Cape, as the Cape of Good-Hope, Cape Verd, &c. As for Mountains, Rocks, Valleys, Fields, Forests, Woods, Plains, &c. they are all well known.

3. Inhabitants.

The earth is divided in respect of its inhabitants into the right hand and left. 1. To poets the north was counted the right hand, and the south the left. 2. To Priests, the south is the right hand, and the north the left. 3. To Astronomers, the west is the right hand, and the east the left. And, 4 to Geographers, the east

is the right, and the west the left. The inhabitants themselves are distinguished; 1. In respect of their Situation. 2. According to their shadows. 3. In respect to the position of the globe. And, 4. according to the countries.

1. Those according to their situations are divided into, 1. Antæci, which ly under the same meridian, and same longitude, but on different sides of the equator, 2. Periæci, which live on the same sides of the equator, and the same latitude, but on opposite sides of the globe. 3. Antipodes, that live diametrically opposite to each other.

2. Those according to their shadows, are divided into, 1. Amphiscii, (called also Ascii) who live in the Torrid Zone, whose shadows, tend both ways. 2. Periscii, which live in the Frigid Zones, whose shadows tend all ways. 3. Heteroscii, in the Temperate Zones, whose shadows tend one way.

3. Those according to the position of the Globe, are distinguished into, 1. Such as live in a Right Sphere, (under the Equator) where the stars rise and set at right angles. 2. Such as live in an oblique sphere, (between the Equator and Poles) where the stars rise and set obliquely. 4. As live in a Parallel Sphere, (under the Poles) where the stars are always parallel to the Horizon.

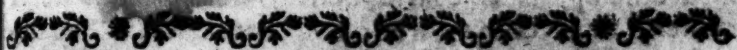
4. Those according to the countries, are distinguished into a great many nations and people, as French, Spaniards, Italians, Germans, &c. all which shall be more particularly treated of hereafter.

4. National Parts.

The earth in respect to its countries is divided into four parts, viz. 1. Europe. 2. Asia. 3. Africa, and 4. America; to which may be added, 5. Terra borealis incognita, and, 6. Terra australis incognita. Those are divided into Empires, Kingdoms, Regions Countries, Nations, &c. subdivided into Provinces, Governments, Prefectures, Circles, Territories, Districts, Counties, &c.

As for the Empires, there are six of special note at present, viz. Turkey, Russia, Persia, Tartary, India, and Ambissina; to these we may add three others that go by the name, viz. Germany, Morocco, Monomotopa. The description of these, with the kingdoms, inferior provinces, and sovereignties, is the main design of this compendium.

Countries are for the most part divided according to princes dominions (but not always so;) they are separated from each other, 1. Sometimes by sea, as Germany, and Denmark from Swedeland, 2. Sometimes by rivers, as Natolia from Turcumania, 3. Sometimes by mountains, as France from Spain, 4. Sometimes by walls, as China from Tartary, and 5. Sometimes divided only according to the towns and forts of the princes, as France from the Low Countries. Thus much for the world in general.



A Description of EUROPE.

THE continent of Europe is situated between 36 and 72 degrees of north latitude, and between 10 degrees west, and 65 degrees of eastern longitude, being bounded by the frozen ocean on the north; by Asia on the east; by the Mediterranean sea, which separates it from Africa on the south; and by the Atlantic ocean on the west.

This continent with its islands, is divided into three grand divisions, viz. the northern, containing Russia, or Muscovy, Sweden, Denmark, and Norway, Great Britain and its islands, Iceland, Greenland and the islands of the Baltic.

The middle division consists of Poland, Germany, and the adjoining hereditary dominions of the house of Austria, the Low Countries, or Netherlands, France, and its conquests on the Rhine.

The southern division contains Turkey in Europe, the tributary provinces of Moldavia, Walachia, the Crim and lesser Tartary, Switzerland and their allies.

Italy, Spain, Portugal, and the islands in the Mediterranean.

Russia, or Moscovy, contains a very large part of Europe, but though the north is but little inhabited, as producing few of the necessaries of life, yet many of the middle and southern provinces are as fruitful as any in Europe, producing every species of corn and fruits which do not require a very warm climate. The inhabitants were civilized, and from Barbarians, were, in some measure, made a warlike and industrious people, by the conduct and example of Peter the Great. But they have not yet learned to trade much in their own bottoms, their goods being exported in foreign shipping; from which also they receive the produce of the southern countries of Europe. Our Russia merchants export thither coarse woollen cloths, long-ells, worsted, stuffs, tin, and tobacco: and from thence import hemp, flax, coarse linnen, linnen yarn, Russia leather, furs, tallow, iron, and pot ashes. The dominions of the Russian Empire extend far into Asia, and even reach to the pacific ocean, being in length from east to west upwards of 3000 miles, and 2500 in breadth from north to south. The government is arbitrary and despotic, and their religion, that of the Greek Church.

Sweden is a cold country, encumbered with barren rocks and mountains, and a great part of the year covered with snow; it has few navigable rivers, but abundance of torrents, which running precipitately from their rocks and mountains, after a short course, run into the Baltic sea, which is frozen up four or five months in the year. The country is filled with great lakes and marshes; Lapland and the northern part produce scarce any vegetables, but between the mountains there are fruitful valleys. The riches of this country chiefly consists in their mines of silver, copper, and iron. They export from Sweden hard-ware; pitch, tar, rosin, masts, deals, and wooden ware, and import thither silks, stuffs, wine, brandy, sugar, spices, tobacco, linnen, paper, and haberdashery wares. Their trade to England has been hitherto most advantageous, the English taking the produce and manufactures of the coun-

ry, and giving them near two thirds of silver in return: but the encouragement now given for importing iron from New England, must put a stop to a commerce so disadvantageous to us. The inhabitants are protestants of the Lutheran persuasion.

Denmark consists of Jutland, the islands of Zealand and Funen, and the little islands about them. The peninsula of Jutland was antiently called the Cimbrian Chersonese, or the peninsula of the Cimbri. The country is generally flat, barren, and sandy; and the air is commonly thick and foggy, occasioned by the seas which almost surround it, and by the numerous lakes in the heart of the country; however, in some parts there is plenty of corn and pasturage. Its chief commodities are fish, furniture for ships, ox hides, tallow, sir, wainscot, &c. The longest day is seventeen hours and an half, and the shortest eight and an half. Their kings have been sometimes hereditary, and at others elective; and sometimes limited, and at others absolute, as they have been ever since the year 1660. when the peasants, groaning under the oppressions of the nobility and gentry agreed to make the crown absolute and hereditary; they were joined by the clergy, and the king having assembled the nobility and gentry in a garrisoned town, in a manner compelled them to resign their liberties. Their religion is Lutheran, as is that of Norway, which is subject to Denmark, and the church lands being seized by the government at the reformation, the clergy depend on the state for their subsistence.

Norway is extremely cold and barren, and on that account is but thinly inhabited. The poor people dry their stock fish, and use it instead of bread. Their chief commodities are stock fish, furs, train oil, pitch, masts, cables, and deal boards, which they exchange for corn, wine, fruits, and the other necessities, and conveniences of life.

As to the islands of Greenland and Iceland, they are cold miserable countries, and but thinly inhabited.

As we are most concerned in the history of Great Britain and Ireland, we shall give a more particular description of them, and place it in an article by itself.

We shall now treat of the middle division of Europe. Poland is a large and level country, being 660 miles in length from north to south, and 560 from east to west. It is a flat level country, well watered by lakes and rivers, the land fruitful, and producing great quantities of wheat and rye; with rich meadows and pastures, which feed vast flocks and herds of cattle; it abounds with wax, pitch, salt, soap, rosin, flax, butter, cheese, corn, and rich furs. The government is an elective monarchy, but the king is so restrained by laws, that he has little else besides the shadow of royalty; and while the nobility and gentry are absolutely free, the people are in the most abject slavery, without property, or any thing they can call their own. The nobility and gentry, who are their landlords, or rather masters, are all as despotic as kings, and have the liberty of doing what mischief they please; they pay only an inconsiderable fine for taking away the life of a tenant; they seize and destroy at pleasure, so that, under the appearance of freedom, this seems to be the worst constitution on earth. As the whole nation is composed of absolute masters and abject slaves, the latter are only employed in cultivating the earth; all the manufactures necessary for the country are carried on by foreigners, and in general by the Jews, who are almost the only people who keep shops, and work at trades. The religion of the country is that of the Romish profession, but Jews and protestants are tolerated. The metropolis of Poland is Warsaw, a large and populous city.

Germany is generally on the north and east, a level country, consisting of barren sands, or marshy grounds; on the south it is encumbered with the mountains of the Alps, but in the middle there is a variety of hills, valleys, fruitful fields and meadows, more particularly along the banks of the Rhine, the Danube, &c. and is adorned with abundance of fine cities, castles, and palaces. This vast country is divided into ten circles, viz. three on the north, the circles of Upper and Lower Saxony, and that of Westphalia. Three on the south, the circles of Austria, Bavaria, and Swabia. Three about the middle, the circles of Franconia, of the Upper and Lower Rhine. And lastly the circle of Burgundy.

which formerly consisted of the dutchy of Burgundy, and the 17 provinces of the Netherlands; but these last have been long severed from the empire. There are in Germany upwards of three hundred sovereign princes and states, most of them arbitrary within their own territories. The emperor is the fountain of honour, and disposes of almost all these places that are not hereditary, and which have a relation to the government of the whole empire. When an emperor dies, his successor is chosen by the nine electors; but if a king of the Romans has been chosen in the preceding reign, he succeeds of course. By the golden bull, the person elected ought to be a Christian prince, of German extraction, and 28 years of age. Before he is installed, he signs a capitulation presented him by the electors, princes, and states of the empire; that he will not alienate the lands or revenues of the crown, introduce foreign forces, or employ foreigners in his service. In return, they are all obliged to assist him, and to join their forces in a time of common danger, and to maintain them at their own expence; and, supposing them unanimous, they are able to raise and pay 500,000 men. The people are of various opinions in religion; the principal sects are those of the Papists, Lutherans, and Calvinists; and there are also Independents, Baptists, Quakers, the Moravian brethren, &c. but the emperor is always a Papist. Germany produces corn, wine, oil, bacon, beer, mum, flax, hemp and fine timber; also black cattle, sheep, and excellent horses. They have mines of iron, copper and silver, of which the silver mines of Hanover are of more value than all the other silver mines in Europe put together. They have also lead, salt, coal, vitriol, quicksilver, nitre, oker, and sulphur. The people are excellent artists, and are remarkable for their honesty and sincerity, in their dealings. Vienna is the metropolis of the German empire, and the seat of the emperor.

The hereditary dominions of the house of Austria, are Bohemia, Hungary, Transilvania, Sclavonia, and Croatia.

The Netherlands are only about 300 miles long, and 200 broad; these contain seventeen provinces, of which seven are possessed by the Dutch, and are called the U-

nited provinces, and the others are called the Austrian and French Netherlands. The names of the united provinces are Holland, Zealand, Friezland, Groningen, Overissel, Gelderland, Zutphen and Utrecht. The other ten provinces are Brabant, Flanders, Hainalt, Limburg, Luxemburg, Namur, Artois, the Cambresis the Marquisate of Antwerp, the Lordship of Malines, or Mechlin. Of these the French possess the entire provinces of Artois and Cambray, part of Flanders, Hainalt, and Luxemburg; the Dutch the north of Brabant and Flanders, and all the rest are subject to the house of Austria.

France is one of the most flourishing kingdoms in Europe, but is not so populous as Germany. The soil is exceeding fertile, producing corn, wine, oil, silk and flax in great abundance, and is extremely well situated for a foreign trade, as it lies on the Atlantic ocean, the English channel, and the Mediterranean sea, and is watered by many large and navigable rivers. Their manufactures are of linnen, woollen, silk and lace, with which they trade to Spain, Italy, Turkey, and to the east and west Indies. The air is temperate, agreeable and healthful; the manners of the people are polite, and they are the most active and enterprizing of any nation in Europe. They are under an absolute government, and profess the Romish religion, though they pay less regard to the pope than any other of his children: but, nevertheless, the protestants, which are here very numerous, are seldom free from persecution.

Of the southern division of Europe, Turkey is the most easterly, and therefore to preserve the order in which we proceeded with the others we shall begin with that first.

Turkey in Europe is a very extensive empire, comprehending some of the richest countries in this part of the world, extending upwards of 1000 miles from east to west, and 500 in breadth from north to south, with the numerous islands in the Archipelago, or Egean sea; but part of them are in Asia, where, as well as in Africa, their dominions are very considerable. In Europe the Turks are possessed of Romania, Bulgaria, Servia, Bosnia, Ragusa, Wallachia, Moldavia, Bessarabia, Budziac, and Oczakow, Tartary, Crim and Little Tartary,

with Albania, Epirus, Macedonia, Thessaly, and all the ancient Greece. Situated as they are, in the centre of the continent, they might command the trade of the whole world: but this advantage they have lost by their indolence and inactivity, and the destructive maxims of their government. The goods imported from Turkey are raw silks, carpets, goats hair, mohair, yarn, goats wool, cotton wool, and yarn, dimities, burdets, skins, cordovants, blue, red, and yellow; coffee rhubarb, turpentine, opium, gum senega, terralemnia, china root, and abundance of other drugs; wine, oil, figs, raisins, dates, almonds, pistachio nuts, allom, vitriol, boxwood, bees wax, saffron, &c. Constantinople is the seat of the grand seignior, who is an absolute prince.

Italy, has a pure, temperate and healthful air, and the soil is in general exceeding rich, but the people are so broke with slavery, and harrassed with the tyrannies, oppressions, and impositions of their priests, that it is far from being sufficiently cultivated. It is in length from north west to south east, 600 miles, and upwards, but the breadth very unequal, as it is said to resemble a boot, it is described, as having the top 400 miles broad from east to west; in the calf of the leg or middle, it is about 120, and towards the instep 80 miles broad. In the north are the dutchies of Savoy, Piedmont, and Montferrat, subject to the king of Sardinia; the territory of Genoa, subject to the Genoese; the dutchies of Milan, Mantua, and the rest of Montferrat, subject to the house of Austria; the dukedom of Modena, subject to its own duke; and the large territories of Venice, subject to that republic. In the middle of Italy is the dukedom of Tuscany, subject to the duke of Lorrain; the popes dominions, which almost surround Tuscany; and the state of Lucca. In the southern division is the kingdom of Naples, subject to the king of the two Sicilies. The people have a taste for the polite arts, and excel in architecture, statuary, music and painting. Our trade to Italy is carried on by separate merchants, who export broad cloths, long ells, bays, druggets, calimancoes, camblets, and other stuffs; leather, tin, lead, fish, pepper, and east India goods; for which they in return im-

port raw and wrought silk, velvets, wine, oil, soap, olives, anchovies, and drugs for dying.

Switzerland is situated in the valleys between the Alps, the highest mountains in Europe, which, though lying between 45 and 48 degrees of north latitude, are for a great part of the year covered with snow, and the air is here much sharper than in countries that lye more to the north. From these mountains the largest rivers in Europe have their source, particularly the Rhine, the Rhone, the Danube, the Rufs, and the Inn. Here are also extensive lakes, those of Constance and Geneva are each sixty miles long. The soil produces some corn and wine, but as the fruits of the earth are frequently destroyed by storms, or cold rains, they, to prevent the poor from perishing, in plentiful years, lay up their corn in magazines. They breed and supply the neighbouring countries with abundance of cattle. They have some crape and linnen manufactures; but as almost all their cloathing is imported from abroad, they wisely rectify this inconvenience, by retrenching all superfluities. Switzerland is divided into three classes. Switzerland Proper, or the thirteen cantons, the subjects of Switzerland, or the conquered countries, and the allies of Switzerland as the Grisons, the republic of Geneva, &c. Of the thirteen cantons some are protestant, and other popish cantons, but they all unite against a common enemy.

Spain enjoys a fine air, and generally serene settled weather, except in spring and autumn; the winter is so moderate in the valleys, that for nine months in the year they have very little occasion for fires; but in June July and August, the heats are very troublesome. The soil produces excellent wheat and barely; they have rich pastures, and their wool is the best in Europe; they abound in wine, oil, and silk, and in oranges, lemons, raisins, citrons, prunes, figs, capers, chesnuts, almonds, and pomegranates; they have valuable mines of copper, lead, allom, and sulphur, and the iron and steel of Biscay is reckoned the best in Europe. But, notwithstanding so fine a country, and the vast treasures they have drained from their American mines, Spain is poor, and but thinly peopled; but their poverty may

be, in a great measure, ascribed to their pride and indolence. Their land is cultivated by foreigners, and they export great part of the produce of their country unwrought. Those of our merchants, who trade to Spain, export broad cloths, druggets, bays, long ells, calimancoes, and other stuffs, tin, lead, leather, fish, corn, hosiery, and haberdashery wares, and from thence import wine, oil, salt, and fruit. It is computed that from this trade England receives a greater balance than from that of any other nation, except the Portugueze.

Portugal is the most westerly kingdom in Europe, being about 300 miles long, and 100 broad; it is neither so hot nor so fruitful as Spain, and is encumbered with some of the most barren and unprofitable mountains; which, however, towards the bottom, being planted with vines, produce most excellent wine; and though the soil produces plenty of olives, as well as oranges and lemons, yet they have not corn enough for their subsistence. The foreign trade of the Portugueze consists either in the exportation of the produce of their own soil, or in the merchandize they receive from their settlements in Asia, Africa, and America. There is no country to which the English trade to greater advantage; for though we import the greatest part of their wine and fruit, they take our woollen manufactures in return. The inhabitants of Spain and Portugal are the most bigotted Papists in Europe.



A Description of ASIA.

A SIA is situated between 25 and 148 degrees of eastern longitude, and between the equator, and 72 degrees of north latitude, being bounded by the frozen ocean on the north, by the Archipelago, the Euxine sea, &c. which separates it from Europe on the north west; by the Red sea, which separates it from Africa on the south west, by the Indian ocean on the south; and by the pacific ocean on the east.

This quarter of the world is thrown into three grand divisions, the first containing the empire of China, Chinesian Tartary, and the oriental islands on the east. The second, India, Usbec Tartary, Calmac Tartary, and Siberia in the middle. And the third containing Persia, Arabia, Astracan, Circassian Tartary, and Turkey in Asia on the west.

China, including Chinesian Tartary, is divided from Siberia by the river Argun, and is 2000 miles in length from north to south, and 1000 in breadth from east to west. This vast empire is usually divided into 16 provinces, in which are computed 155 capital cities, 1312 of the second rank, and 2357 fortified towns. On the limits of China, there is a stone wall 1500 miles long, built to defend them against the incursions of the Tartars; but, notwithstanding this, about an hundred years ago they made a conquest of China. This is thought to be the most populous empire in the world. In the north and very far to the south, the air is very cold, occasioned by the height of the land. The chief produce of the country is silk, tea, china ware, gold dust, and japan work, of which England, Holland, Portugal, and France, import a great deal, sending them silver in return. Their religion is pagan, of which several sects are tolerated. Europeans complain of them as a very deceitful people.

Of all the eastern islands, those of Japan are the most famous; that called Japan, and which gives name to all the rest, is about 600 miles long, and from 100 to 150 broad, besides which, there are several others of a considerable bigness, all subject to the emperor of Japan, who has fifty or sixty vassal princes under his dominions. The revenues of this emperor are said to be greater than those of any monarch upon earth. They trade with the Chinese, but no European nation are allowed this privilege except the Dutch, who carry to Japan spices, sugar, silks, woollen and linnen cloth; elephants teeth, and haberdashery wares, and they receive in return gold, silver, fine copper, cabinets, and other Japan and lacquered wares.

The peninsula of India, or India Proper, is the most southern part of the second division of Asia, and is about

2000 miles from south to north, and in the broadest part 1500 from east to west. The northern part of this vast country, has a temperate healthful climate, but in the south it is extremely hot, especially when the winds blow in April and May. They have periodical rains, which, beginning in June last till October, which is the season for planting and sowing; but they have scarce any grain besides rice, except in the north. The produce of the continent of India, and what the Europeans export from thence, are chints, calicoes, muslins, pepper, and diamonds, which most nations purchase with silver, but the Dutch, frequently barter spices for them. Their religion is paganism, and they all believe in the doctrine of transmigration. They are under the government of the great Mogul, an arbitrary and despotic prince, who is the sole landlord and proprietor as well as sovereign.

India beyond the Ganges extends near 2000 miles from north to south, but is of a very unequal breadth. It comprehends the kingdoms of Asem, Ava, Pegu, Laos, Siam, Cambodia, and Malacca, the last is in the possession of the Dutch, and the rest is governed by as many Indian princes. Great part of this country would be intolerably hot, were it not for the periodical rains, which, when the sun is vertical, overflow the country, and the breezes which come from the sea. The natives are of an olive colour, and their religion various sects of paganism. There is no country where there are such numbers of elephants. Our merchants here meet with gold and precious stones, canes, opium, and such other articles as are usually found between the tropics, but they have no corn except rice.

Tartary, which is the same as the ancient Scythia, comprehended all the north of Europe and Asia, of which the Russians possess the principal part, and have given it the name of Siberia; and this part of their dominions extend even to the pacific ocean, and is 2000 miles in length, and 1300 in breadth. The Tartars of Astracan, and the Calmuc Tartars, are also subject to Moscow, those of Circassia and Dagistan, sometimes put themselves under the protection of the Turks, and Persians, and sometimes of the Russians. The Usbec Tartars are tributary to the sovereign of Persia. Nor-

thern Tartary is a barren country, almost always covered with snow, in which are few houses or inhabitants. But in the south the Tartars enjoy a temperate climate, and a fruitful soil; yet they do not apply themselves to cultivate the land, but are continually moving from place to place to find pasture for their numerous flocks and herds.

Persia is the first country we shall mention in the third division of Asia. It is 1200 miles long, and almost as many broad. In the south, which lyes near the tropic of Cancer, the air is so excessive hot, that for two or three months in the year it is dangerous to stir out at noon; for at that time the winds blowing over a vast tract of burning sands, are heated to such a degree as frequently to prove mortal. There is very little water, but what they have is managed with the greatest care, and conveyed through innumerable aqueducts to their towns, their fields and gardens. It is a country incumbered with barren mountains, but whose valleys are fruitful. They have a prodigious variety of the richest fruits, but scarce any corn except rice. The soil also produces abundance of medicinal drugs; and they have a fine breed of horses, but as the country is very sandy, and filled with large deserts, their camels and dromedaries are their most useful animals. One of the principal manufactures of Persia, is embroidery in gold and silver, on cloth, silk, or leather. Turkey leather is chiefly brought from hence and carried thro' Turkey; as also those called Turkey carpets are really made here. But the principal manufacture of the country is that of silk, which they either work up alone or mix with cotton, camel or goats hair; their brocades, gold tissue, and gold velvet are admirably fine. They also manufacture camel hair stuffs, camblets, silk and worsted druggats. Their greatest men are merchants, but the Armenians and Indian banyans, who reside there, carry on the most distant foreign traffic. They take broad cloth from England, in exchange for their raw silk, and an act has lately passed here for carrying on the same trade through Russia. Our East India company have long traded thither by the way of Gombroon and the Persian gulph. The people are civil to strangers, but live in a luxurious

manner; their religion is that of the Mahometan, and the Sophy of Persia is an absolute prince.

Arabia joins on the east to Persia, and is a country of vast extent, governed by several princes, and divided into many states. The people generally live in tents, and move from place to place to find pasture and water for their cattle, great part of their country being a dry and barren desert.

Turkey in Asia, contains Chaldea, now called Eyraca, Arabic, Mesopotamia, now Diarbeck; part of Assyria, now called Curdistan, Armenia, now Turcumania, part of Georgia, Mingrelia, and Circassia; part of Arabia, Syria, Palestine, Natalia, or Asia Minor. Some of which are as fine and fruitful countries as any in the world.

A Description of AFRICA.

AFRICA is joined to Asia by the narrow isthmus of Suez, and situated between 37 degrees north and 35 degrees south latitude, and between 18 west, and 15 degrees of east longitude, bounded by the Mediterranean, which separates it from Europe on the north, by the isthmus of Suez, the Red Sea, and the eastern ocean, which divides it from Asia on the east; by the southern ocean on the south; and by the Atlantic ocean, which separates it from America on the west.

Africa is divided into ten divisions, Egypt, Abyssinia, or the Upper Ethiopia: the coast of Anian and Zanguebar; Monoemugi, Monomotopa, and Caffraria, or the Lower Ethiopia; Congo, Angola, and Guiney; Nigritia, or Negroland; Zaara; Biledulgerid; the ancient Numidia; the empire of Morocco; and the coast of Barbary.

Egypt is situated near the extremity of the Mediterranean, and is 600 miles in length from north to south, and from 100 to 200 in breadth from east to west. The air is here very hot and the soil extremely fertile, occasioned by the overflowing of the Nile, without which, it

would be a barren waste, as it very seldom rains in this country. The lower Egypt is a triangular island, made by the Levant, and the two principal branches of the Nile. No place in the world is better furnished with corn, flesh, fish, fruits, and the most excellent garden stuff, but the people are very subject to have sore eyes. The Egyptians were the inventors of almost all arts, and there are still to be seen their antient pyramids, one of which is 700 feet high. Egypt is subject to the grand seignior, but his authority is extremely limited by the Egyptian princes.

Ethiopia superior, comprehending Abyssinia, Nubia, and Abex, joins to Egypt on the south. The river Nile rises from a lake almost in the middle of Abyssinia, which being swelled by the periodical rains, that fall annually between the tropics, overflow Egypt and all the low grounds which border on that river. The country produces plenty of corn, rice, wine, sugar, flax, and all the fruits proper to the climate; but the Turks being in possession of Abex, have shut up all the avenues to this country. Camels, horses, oxen, sheep and asses are their cattle. The Abyssines are perfectly black, but have neither flat noses nor thick lips. It was the king of this country who was called Prester John. They keep both the Christian and Jewish sabbath, and both baptize and circumcise their children, and even their female children.

The coast of Anian is a barren country, on the east of Abyssinia, subject to several African princes.

Zanguebar, is another country on the east of Asia, lying on the south of Anian, and contains the provinces of Majadoxa, Melinda, Quiloa, Mozambique and Sofala. The Portugueze have here made several settlements, and trade with the natives for gold, slaves, ivory, ostrich feathers, wax and drugs.

Caffraia, or the country of the Hottentots, lyes in the southermost part of Africa, and almost surrounds the inland country of Monomotapa, a part very little known; the Hottentots are a savage and nasty people. In this country the Dutch have built a town and castle near the most southern promontory, called the Cape of Good-Hope.

Congo and Angola lies on the west of Caffraria. Thither the European merchants resort to purchase slaves. These countries are subject to several Negro princes; but as the Portuguese have a great many settlements on this coast, and in the inland country, they pretend to the dominion of the whole, and that these princes are their vassals; however the trade is open to all the nations that please to traffick with the natives. The chief town on this part of the continent is St. Salvador; but the capital of all the Portuguese settlements in this part of Africa, is the city of Loango, in a small island near the coast. The slaves of Angola, as they are not bred to labour, are generally agreed to be the laziest and most untractable of any of the slaves purchased on the coast.

Guiney coast has the Atlantic ocean on the south and west, and is divided into the grain coast, from its chiefly producing Guiney grain; the ivory coast, from the plenty of elephants teeth found there; the gold coast, from its furnishing much gold; and the slave coast, from its furnishing the greatest number of slaves. The English, Dutch, and French, have forts and factories on this coast; for the Portuguese, after having possessed the whole for upwards of 100 years, were drove from hence by the Dutch. The princes of the inland country being almost always at war, sell their prisoners to the Europeans for slaves.

Negroeland is a fruitful country, producing rice, Guiney grain, and Indian corn; also cocoa nuts, plantains, pulse, palm trees, and tropical fruits. The Europeans trade thither for slaves, gold, ivory, bees-wax, gum-scenna, and other drugs.

Zaara is a barren desert country that produces scarcely any thing to sustain life; it has no towns, but the few inhabitants who know where to find springs of water, live in tents, and wander from one country to another, to find grass and water for their cattle. These people are of an olive complexion, their language is Arabic, and their religion Mahometanism.

Biledulgerid lies on the north of Zaara; it is partly subject to the Turks, and partly to the king of Morocco. The climate is very hot, but generally esteemed wholesome. The soil is but indifferent, and the

commodities are chiefly cattle, corn, dates, and indigo. The religion of the inhabitants is that of Mahometanism.

Morocco has the Mediterranean sea on the north and the Atlantic ocean on the west, and is about 500 miles long, and 200 broad. It is a fine country, consisting of mountains and fruitful plains. The soil produces corn and the richest fruits. They send several thousand camels, horses, and mules, every year to Mecca and Negroland: to Mecca they carry fine woollen goods, Morocco skins, indigo, cochineal, and ostrich feathers, bringing back silks, muslins, calicoes, coffee, and drugs. By the caravans to Negroland they send salt, silk, and woollen goods: taking gold, ivory, and negro slaves in return. The emperor is an absolute despotic tyrant but he has no ships of war except small pyratrical vessels.

Barbary, comprehending Algiers, Tunis, Tripoli, and Barca, lyes on the east of Morocco, and extends along the southern shore of the Mediterranean, as far as Egypt. The air of the country is temperate and healthful, the soil fruitful; its chief commodities are honey, wax, oil, flax, dates, almonds, hides, &c. The religion of this country, as well as Morocco, is Mahometanism.



A Description of AMERICA.

America is situated between 80 degrees north, and 58 degrees south latitude, and between 35 and 145 degrees of west longitude. It is bounded on the east, west and south by the ocean: but on the north some have imagined it joined to the other continent: whilst others, finding a great current flowing in Hudson's bay from the east, suppose that it is divided from the north by a large river, which has a communication with the ocean, on the other side of the continent. Others have imagined, that the north east of Siberia joins to the N. west of the unknown continent of America, west of

Hudson's bay; and that thus instead of two continents, we have but one. If this supposition be true, it will account for the peopling of a country so far distant from that place of the world in which man was originally placed.

The principal part of America is at present under the dominion of Spain, Portugal, Great Britain, and France.

The Spanish dominions, which are by far the largest, comprehend Old and New Mexico, Florida, Terra Firma, Peru, Chili, Patagonia, Paragua, and la Plata, the country of the Amazons, and the Spanish islands; of which the most considerable are Cuba, Hispaniola, Porto Rico, and Trinidad.

The second division is subject to Portugal, and consists of the country of Brasil, extending from the river Amazon, under the equator, to the river La Plata, in 35 degrees south latitude, an extent of 3000 miles, but scarcely 200 miles broad.

The third grand division is subject to Great Britain, and lyes along the eastern coast of North America from 31 to 51 degrees of north latitude, and lying in the following order from north to south. The Isle of Newfoundland, New Britain, Nova Scotia, or New Scotland, New England, New York, the two Jerseys, Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Georgia, and the Islands of Jamaica, St Christopher, Barbadoes, &c.

The fourth division is claimed by the French, which, according to their maps, extends from the gulph of Mexico to the north of Canada, that is, from 28 to 52 degrees of north latitude, being 1500 miles from north to south, and very little less from east to west: these having the British dominions on the east, and New Mexico on the west, comprehending the greatest part of Canada and Florida, to which countries they have given the Names of New France and Louisiana. The islands subject to France are those of Caen, and part of the island of Hispaniola, Martinico, Guadalupe, and several of the other Caribbee islands.

The Dutch are possessed of Surinam on the coast of Guiana, or Caribbiana in South America, and others on

the north coast of Terra Firma, of which those of Carallow, Arabia, and Bonnaire are the chief, and from hence they carry on a clandestine trade with the coasts of Spanish America.

Denmark is possessed of the island of St Thomas, one of the Caribbees.

It would take up too much room to give a particular account of all the countries of this vast continent. We shall therefore conclude our account of this part of the earth with some general observations.

America, as a continent, is divided into two parts north and south, by the Isthmus of Darien. This isthmus is a neck of land, of about sixty miles broad, and 300 in length, and filled with high mountains, on which the snow frequently lyes, though it is only between 8 and 10 degrees of north latitude; the wind, which great part of the year blows from thence into the south sea, is cool and refreshing; while on the other side, the air of the Atlantic ocean is excessive hot. America enjoys all the advantages of the other three parts of the globe, being extremely fruitful, and having a fine air, except towards the north, where it is much colder than any part of Europe that lyes under the same latitude. The air is filled with an infinite number of birds, and the rivers with fish, and (where uncultivated) the land with trees; so that the principal difficulty in making a new settlement consists in clearing the ground. The British and French settlements chiefly produce tobacco, sugar, pepper, corn, rice, timber, iron; and from hence are imported skins, furs, fish, and some drugs. The Spanish settlements produce cochineal, and other drugs, with great quantities of gold and silver; but it is said that the gold mines of Mexico are almost exhausted. The Portuguese settlements at Brazil in South America at present produce vast quantities of gold, and diamonds. And the Dutch settlements at Surinam furnishes them with tobacco and sugar.



 BRITISH ISLANDS.

THE British islands, or the English dominions, ly in the western ocean, on the north of France and west of Denmark, Germany and the Low Countries. Situated between the 8th, and 20th, and 35 min. of lon. and between the 50 and 59 deg. of lat. Under this name are comprehended four distinct parts, besides the lesser isles, viz. 1. England, 2. Wales, 3. Scotland, and, 4. Ireland.

I. ENGLAND.

The kingdom of England lyes on the south of Scotland, and north of France, from which it is divided by the Channel, of a triangular form, encompassed on three sides with sea. In length from north to south, about 360 miles, and in breadth from east to west about 300, containing about 27 millions of acres.

The inhabitants are mostly of the reformed religion, taught here in its purity (the divisions I forbear to mention) some few are Papists; their language is a branch of the Teutonick, chiefly composed of old Saxon, Latin and French. Their chief commodities are corn, cattle, tin, copper, lead, iron, timber, coals, abundance of wool, stuffs, linnen, hides, tallow, butter, cheese, beet, &c. It is divided into six circuits, viz.

1. Northern circuit, 2. Midland circuit, 3. Oxford circuit, 4. Norfolk circuit, 5. Home circuit, 6. Western circuit.

Rivers of principal note are four, viz. 1. Thames, 2. Severn, 3. Trent, and, 4. Tweed.

Mountains of the greatest account are three, viz. Ingleborough, 2. Pendle, and 3. Pennegent.

Archbishopsricks 2. Bishopsricks 20. Universities 2.

An account of the several counties of England and Wales, with their produce, market-towns, and market-days.

Note, *m* stands for Monday, *tu* for Tuesday, *w* for Wednesday, *th* for Thursday, *f* for Friday, and *s* for Saturday.

Bedfordshire.

AN inland county, in Lincoln diocese, 73 miles in circumference, is a fruitful county, well stored with corn and cattle, especially in the northern parts. It produces barley and wheat as good, if not the best in England.

Market-towns

Bedford, the shire town, Tuesday and Saturday.

Dunstable w	Shefford f
Woburn f	Biggleswade tu
Amphill th	Potterton f
Leighton tu	Tuddington f
Luton m	

Berkshire.

An inland county in the diocese of Salisbury, and a pleasant county, 120 miles round, where the air is good and the soil fruitful. It yields plenty of corn, cattle, wild fowl, wool, and wood, especially oak.

Market-towns.

Reading, the shire town, Saturday.

Abingdon m and f	Newbury th
Windfor f	Faringdon tu
Wallingford tu and f	Wantage f
Maidenhead w	East Wey w
Hungerford w	Oakingham tu

Buckinghamshire, or Bucks.

Another inland county in Lincoln diocese, 138 miles in circuit, is very plentiful both in corn and pasture, particularly the famous Vale of Aylesbury, which feeds an infinite number of sheep, yielding excellent wool. The Tame, Ouse, and Coln are its principal rivers.

Market-towns.

Buckingham the chief, Saturday.

Aylesbury f	Beaconsfield th
High Wickham f	Chesterham w
Colebrook w	Risborough f
Stoney Stratford f	Amersham tu
Oulney my	Newport Pagnel f
Marlow f	Ivingo f
Wendover th	Winflow th

Cambridgeshire.

An inland county, in the diocese of Ely, 130 miles in circumference abounds in corn and pasture, fish, wild-fowl and saffron. 'Tis true, the north part of it called the Isle of Ely is full of marshes, and subject to small inundations, which makes it unhealthful, and yield but little corn; but this defect is richly supplied with plenty of cattle, fish, and wild fowl. Cambridge is remarkable for a famous university, containing 12 colleges and 4 halls, and are as followeth.

Peter House	Founded in	1284. by Hugh de Balsam,
Corpus Christi, or Bennet col.		bishop of Ely.
Gonville and Caius		1346 by Henry of Monmouth,
King's college		duke of Lancaster
Queen's college		1348, and so nam'd from its
Jesus college		founders.
		1441. by King Henry VI.
		1448. by Margaret, wife to
		Henry VI.
		1497. by L. L. D. Bp. of Ely.

Christ's college	} Founded in	1506. by Margaret countess of
St John's college		Richmond, mother of H. VII.
Magdalene col.		1506. by the same.
Trinity college		1542. by E. Stafford, the last D.
Emanuel college		of Buckingham of that name.
Sidney Sussex col.		1546. by King Henry VIII.
		1584. by Sir Walter Mildman,
		chancellor of the exchequer.
		1598. by Frances Sidney, coun-
		tefs of Suffex.

HALLS.

Clare hall	} Founded in	1343. by Richard Badew,
Pembroke hall		1347. by Mary de St Paul, coun-
Trinity hall		tefs of Pembroke.
Katherine hall		1353. by William Bateman, bp.
		of Norwich.
		1459. by Robert Wood, chan-
		cellor of the university.

Market-towns.

Cambridge, the chief, Saturday.

Ely f	Merche f
Caxton tu	Roylton w
Newmarket tu	Wisbich f
Linton th	Soham f

Cheshire, or county of Chester.

A maritime county in the diocese of Chester, 112 miles round. It yields more pasture than corn, and is for the most part level: its greatest hills being those that part it from Stafford and Derbyshire. There are in it several forests, particularly Delamere and Macclesfield forests: and so great a number of parks, that few gentlemen's country seats are without one.

There are also many heaths, in which both sheep and horses feed; and some mossy plots, which make good turf to burn.

Its principal rivers are the Dee, which waters the S. parts, the Weaver running through the middle, and Mersey northward.

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Cheese and salt are the chief product of this county, and both in great request all over England.

Market-towns.

Chester, the capital, Wednesday and Saturday.

Namptwich f	Stockport f
Middlewich f	Sandwich th
Norwich f	Aldringham tu
Macclesfield m	Malpas m
Congleton f	Knotsford f
Fordeſham w	

Cornwall.

A maritime county in the diocese of Exeter, is the most western county of England; surrounded with the sea on the north, south, and west, and parted from Devonshire, eastward by the Tamer, all but a slip of land; so that 'tis a perfect peninsula, 150 miles in circumference: but is none of the most fruitful parts of England. It is true, its valleys are full of corn and pasture, and the hills famous for their tin and copper mines; and it abounds in wild fowl, and the seas thereof in fish. It yields also plenty of samphire, eringo, fine slate and marble.

Market-towns.

Launceſton, the chief, Saturday.

Leſkard f	Truro w and f	Hellſton f
Leſtwithiel f	Bodmin f	Saltiſh tu
Catchelford f	Foway f	St Columb th
Weſtlow, or	Kellington w	Market-Jew th
Port Pigham f	St German f	Padſtow f
Grampound f	Newport f	Penzance th
Faſtlow f	Tregony f	Falmouth th
Penryn w, f and f	St Ives w and f	Stratton tu

Cumberland.

A maritime county in the north of England, and in the diocese of Chester and Carlisle, is bounded northward with Scotland, and westward with the Irish sea, and is 168 miles round. It yields plenty of corn, pasture, wild fowl, fish, coal pits, and mines of copper and lead.

Market-towns.

Carlisle, the chief, Saturday.

Cockermouth tu	Allston-Moor f
Whitehaven th	Ireby th
Refwick f	Kirk Oswald th
Penrith tu	Longtown th
Brampton tu	Ravenglass f
Holm f	Wigton tu
Egremont f	

Derbyshire.

An inland county northward in the diocese of Litchfield and Coventry, 130 miles in circuit, is a plentiful county of pasture, corn and wood. Here are also quarries of free stone, marble, mill, lime, whet stones, coal, lead and iron mines, chrystal and alabaster.

The river Darwent, which glides through this county from north to south, and falls into the Trent, divides it into two parts east, and west.

Market-towns.

Derby, the shire-town, Friday.

Chesterfield f	Ashbourn f
Worksworth tu	Blackwell m
Bolsover f	Dronsfild th
Alfreton m	Tiddeswall w

Devonshire.

A maritime county in the diocese of Exeter, 200 miles in circumference. It lies in the west of England,

borders upon Cornwall, and is watered on two sides with the sea, viz. north and south. The air is very good, and the soil for the most part fruitful; but there are both hills and woods. This county abounds chiefly in corn, pasture, wool, wild fowl and fish. There are also tin and lead mines. Its chief manufactures are kerseys, serges and lace.

Market-towns.

Exeter, the chief, Wednesday and Saturday.

Barnstaple f	Topsham f	Dodbrood w
Dartmouth f	Axminster f	Hartland f
Honiton f	Autrey tu	Hatherly tu
Oakhampton f	Bampton f	Holdsworthly f
Plimpton f	Bow f	Kingsbridge f
Tavistock f	Chimleigh th	Kirton th
Tiverton tu	Cudleigh f	Modbury th
Plymouth m & th	Colampton f	Moreton f
Totness f	Comb Martin f	Newton th
Ashburton f	Culliton th	
Biddeford tu	Torrington f	

Dorsetshire.

A maritime county upon the Channel, lies east of Devonshire, in the diocese of Bristol, 150 miles in compass. It is a pleasant and fruitful country, yielding plenty of corn, cattle, pasture, wild fowl and fish; also abundance of hemp, and quarries of free stone and marble.

Market-towns.

Dorchester, the capital, Saturday.

Weymouth tu & f	Wareham f	Cerne w
Malcomb Regis	Corfe-Castle th	Frampton th
tu & f	Cranborn w	Sherborn tu and f
Bridport f	Blandford f	Milton m
Bere w	Sturminster th	Winbourn f
Pool m and th	Abbotsbury th	Stalbridge f
Shaftesbury f		

Durham.

A maritime northern county, commonly named the Bishoprick of Durham, 107 miles in circuit. The air is sharp, and the soil not very fruitful. The east side is the best, the south full of marshes, and the west full of rocks. The greatest advantage of this county consists in coal, iron and lead mines.

Market-towns.

Durham, the capital, Saturday.
 Auckland th Hartlepool m
 Stockton f Stainthorpe tu
 Sunderland f Bernard Castle w
 Darlington m

Essex.

A maritime county in the east part of England, and the diocese of London, called Essex from the East-Saxons, by whom it was inhabited. It is about 146 miles in compass. Here the air is temperate, but near the sea and Thames very moist and agueish. The soil yields plenty of corn, cattle, and wool. Here is also abundance of fish and wild fowl. In the north parts saffron grows to admiration. And there are some parts, the soil of which is so rank, that after three crops of saffron, it yields good barley for near 20 years together, without compost.

This county is watered by a great number of rivers, besides the Thames that parts it from Kent, the Stour from Suffolk, the Lea from Middlesex, and the little Stour from Hartfordshire; here's the Coln, Chelmer, Crouch, Roding, and many other Rivers, all yielding plenty and variety of fish.

Market-towns.

Colchester, the county town, Saturday
 Harwich tu Hatfield f Rumford w
 Barking f Witham tu Ingerstone w
 Maldon f Chelmsford f Walden f

Billericay tu	Burntwood th	Dunmore f
Cogeshall f	Graves th	Halfhead f
Horndon f	Raleigh f	Waltham Abbey tu
Manningtree tu	Thaxtead f	Sudbury f
Epping th and f	Braintree w	

Gloucestershire.

An inland county in the diocese of Gloucester, 138 miles round, is a fine, fruitful and delightful country. The hills on the east side, called Cotswold, are covered with flocks of sheep, whose wool is called the finest in Britain. The middle parts are level, and watered by the Severn, which contributes much to the fertility. Westward is the ancient forest of Dean, formerly 20 miles long; but now much less; the iron mines having consumed a great part of it.

Besides the Severn, which crosses this county from north to south, here is the Avon that parts is from Somersetshire, the Wye that partly divides it from Monmouthshire, besides the Stroud and the Isis, all very fishy rivers; the Severn yielding great plenty of salmon.

Formerly the vales of this county were full of vineyards, which have been since turned into orchards, yielding plenty of apples for cyder.

In short, this county abounds in corn, wool, wood, iron, cyder and salmon. Among its manufactures, the woollen is most considerable. Here is also made great quantity of good cheese.

Market-towns.

Gloucester, the thire town, Wed, and Sat.		
Cirencester m	Fairford th	Northleech w
and f	Tewksbury f	Blackley w
Dursley th	Camden w	Newnham f
Stroud f	Chettenham f	Letchlace tu
Newent f	Sudbury th	Panwick tu
Stow th	Tedbury w	Wickware m
Thornbury f	Winchcomb f	Wotton f
Marshfield tu	Morton f	Dean m

Hampshire, Hants, or Southampton.

This is a maritime county, on St. George's Channel, between Suffex East and Dorset West in the diocese of Winchester, 100 miles in circuit. It is a pleasant and fruitful county, yielding plenty of grass, corn, wool, wood and iron; and particularly noted for the excellency of its honey and bacon.

On the west side it is watered by the Avon and Stour, which meet near the sea; and on the east by the Test and the Itchin, that joins near Southampton.

Market-towns.

Southampton, the shire-town, Tu. and Fr.

Winchester w and f Farnham th

Portsmouth th and f Basingstock w

Andover f Kingsclear tu

Limington f Ringwood w

Petersfield f Odiham f

Stockbridge th Rumsey f

Whitechurch f Waltham tu

Newport w and f Aleston th

Alton f

Hartfordshire.

An inland county, in the diocese of London and Lincoln, 130 miles round, is a fine delightful place; and has more gentlemen's parks than any other county. Here the inhabitants breathe a wholesome air, and the soil yields plenty of corn, grass and wood. The Lea and Coln are its principal rivers; wheat, barley, and malt its chief commodities, and, with Bedfordshire, the best in Great Britain. The plowmen and farmers are outdone by none.

Market-towns.

Hartford is the county town, Saturday.

St. Albans t	Baldock th
Barnet m	Hitchin tu
Ware tu	Hodson th
Barkhamstead m	Stevenage f
Rickmansworth f	Thring f
Hatfield th	Watford tu
Buntingford m	Hempstead th
Standon f	

Herefordshire.

An inland county in Hereford diocese, toward Wales, in circuit 120 miles; abounds in all things necessary for life, particularly corn, wool, salmon and cyder. Its wool and cyder are counted the best in Great Britain; and yet their cyder is made of the red streak apple, scarce eatable, but growing no where so well as in this county.

Market-towns.

Hereford is the capital, Wed. Frid. Sat.

Lempster f	Pembridge tu
Weobly th	Ledbury tu
Kyniton w	Bromyard m
Ross th	

Huntingdonshire.

An inland county in the diocese of Lincoln. by some nick named Willowshire, from its plenty of willow, is 67 miles round, was formerly a very woody county, and consequently most proper for hunting whence the name of Huntingdonshire. Now it is open and marshy on the N. E. but plentiful of pasture. In general it is a pleasant county, diversified with hills, and yielding plenty of corn and cattle. Its principal river is the Ouse; now made navigable, whose beautiful meadows, with such multitudes of cattle upon them, are well worth seeing.

Market-towns.

Huntingdon, the chief, Saturday.

St. Ives m Ramsey w

Kimbleson f Yaxley tu

St. Neots th

Kent.

A maritime county, at the east part of the channel, in the diocese of Canterbury and Rochester, is 160 miles in compass. According to the different parts of its soil, 'tis divided into three parts, viz. the Downs, which have health without wealth; the Marshy Parts, that have wealth without health; and the Middle that has health and wealth. One part of this county is wood, another corn, and the third pasture. Its soil yields plenty of wheat in some places, in some barley, and others excellent cherries and pippins.

Market-towns.

Canterbury (famous for its cathedral) is the capital,

Wednesday and Saturday.

Rochester f	Cranbrook f	Sevenoak f
Maidstone th	Cray w	Tenterden f
Dover w and f	Dartford f	Malling f
Sandwich w and f	Eltham m	Milton f
Romney th	Faversham w and f	Turnbridge f
Smarden f	Folkstone th	Westram w
Hithe f	Gravesend w and f	Woolwich f
Bromly th	Lenham tu	Wrotham tu
Wye th	Lidd th	Ashford f

Sussex.

A maritime county upon the Channel, with Kent on the E. and Hampshire W. in Chichester diocese, is 158 miles round. Its Downs, near the sea are charming, and its vallies (called the wild of Sussex) very plentiful, of oats especially. The forests are barren, but the E.

parts yield abundance of iron, which has occasioned a vast consumption of wood. Here the roads are so deep in winter, that in some places, coaches must be drawn with oxen. This county is well watered, but with rivers of no long course. Arun is the principal. A Sussex carp, an Arundel mullet, an Amerly trout, and a Chichester lobster are much admired. And so is the white-ear, a bird as good as a French ortolon. Its principal manufactures are iron, guns and glass.

Market-towns.

Chichester, the chief, Wed. and Sat.	
East Grinstead th	Petworth w
Hastings w and f	Steyning w
Rye w and f	Battle th
Arundale w and f	Hailsham f
Hortham f	Bright Hemston tu
Midhurst th	Cuckfield f
Lewes f	

Lancashire.

A maritime county in the diocese of Chester, bounded with the Irish Sea; is 170 miles in circuit; of all maritime counties the least subject to fogs, and the inhabitants generally strong bodied. The soil is partly upon the level, yielding good wheat and barley, and the bottom of the hills excellent oats. But the hilly parts eastward are generally barren.

Market-towns.

Lancaster is the county town, Saturday.

Cliethero f	Blackbourn m	Haslingdon w
Liverpool f	Cartmel m	Garstang th
Preston w, f and f	Coln w	Kirkham tu
Wigan m and f	Bury th	Hornby m
Manchester f	Charnley f	Howstead m
Warrington w	Dalton f	Ormskirk tu
Ulverston th	Rochdale tu	Poulton m
Bolton m	Hawkshead m	Perfect tu

Leicestershire.

An inland county, in the diocese of Lincoln, is 96 miles in circuit, enjoys a good air, and abounds in corn, and pasture, and is particularly famous for pease and beans. Pasture land is so good, that here are many farms let between 500 and 2000 l. a year. The sheep and horses which are sent in such numbers to London are redoubtably the largest in England. It yields plenty of coal. Its principal rivers are the Stour, Reek, and Swift.

Market-towns.

Leicester is the county-town, Saturday.

Ashby de la zouch f	Lutterworth th
Befworth m	Longborough th
Harborough tu	Milton tu
Hallaton th	Mountsorrel m
Hinkley m	Waltham w and th
Balsdon f	

Lincolnshire.

A maritime county in the diocese of Lincoln, bounded east with the German sea, is 180 miles in circuit. The north and west parts are the most fruitful; the east and south marshy, yet abound in fish and wild fowl.

Market-towns.

Lincoln is the chief, Saturday.

Boston w and f	Binbrook w	Dunnington f
Grantham f	Alford tu	Falkingham th
Stamford m and f	Burton m	Holbeck th
Grimsby w	Barton m	Horncastle f
Gainsborough tu	Morton th	Louth w and f
Bullingbrook tu	Bourn f	Sleaford m
Spalding tu	Tatterhall f	Spilsby m
Stanton m	Wainfleet f	Salisbury m
Burgh th		

Middlesex.

An inland county, in the diocese of London, the metropolis of great Britain, is 81 miles in circumference. It has a sweet wholesome air, and fertile soil, much improved by the compost (or dung) of London. The Thames that waters it, and separates it from Surrey, is the principal river.

Market-towns.

LONDON, the metropolis, hath markets for every day in the week

Westminster m, w and f	Uxbridge th
Brentford th	Enfield f
Stains f	Edgworth th

Monmouthshire.

A county in the diocese of Llandaff, formerly Welch, but now reckoned among the counties of England. It lyes wellward on the borders of Wales, watered on the south by the Severn, which falls there into the sea. It is 80 miles in circuit; woody and hilly, but very plentiful; to which the rivers Usk and Wye, Monnow and Rumney, contribute very much. The Usk and Wye yield plenty of salmon and trout.

Market-towns.

Monmouth, the principal, Saturday.

Abergavenny tu	Chepstow f	Pontpool f
Caerleon tu	Newport f	Uske m and f

Norfolk.

A maritime county, in Norwich diocese, bounded on the north and east with the German sea, is 140 miles in circumference. The soil is in some places fat, in some sandy and in others heavy. Towards the sea 'tis level, and yields plenty of corn. In other parts you have woods and heaths. Those feed abundance of cattle

and these infinite numbers of sheep and rabbits. Its principal rivers are the Ouse, Waveney, Yare, and Thyrn: its commodities, corn, wool, honey, and saffron, the best growing near Wallingham: its manufactures stuffs and stockings. The neighbouring sea swarms with herring. Jet and amber are sometimes found upon the coast. From Norwich to Yarmouth, about 30 miles, is all rich meadow; upon which most of the Scots runs graze, till they are fat, and then make excellent beef.

Market-towns

Norwich, the capital, Wed. Frid. and Sat.

Lynn tu and f	Downham f	Comer f
Yarmouth f	Walsingham w	Diss f
Thetford f	Windham f	Harleston w
Attleborough th	Ropeham f	Heiling tu
Alesham f	Snasham f	Holt f
Buckingham f	Falkenham th	Wotton w
Burnham f	Fulstam th	Worsted f
Dearham f	Hingham f	Scby every second
Walsingham f	Causton tu	Swatham f [m]

Northamptonshire.

An inland county, in Peterborough diocese, 120 miles in circuit, is one of the best counties in England, has a healthful air, rich, fruitful soil, abundance of inhabitants, and claims the honour of having more noblemens seats than any other county. It abounds in corn and cattle, wood, and salt petre. Its principal rivers are the Ouse, the Welland, and the Nen, all rising in this county.

Market-towns.

Northampton, the shire town, Saturday.

Peterborough f	Rothwell m
Brackley w	Kittering f
Daventry w	Wellingborough w
Oundle f	Trapstone tu
Towcester f	Cliff tu

Northumberland.

A maritime county, in Durham diocese, and bordering upon Scotland, is 160 miles in circumference, bounded by the sea eastward, and on the west, by the impassable mountains of Stainmore.. It has a keen piercing air; is not the most fruitful, but some parts of it are very good, especially towards the sea. Here are several lead and coal mines; a multitude of monumental antiquities, with wild fowl and fish in abundance.

Market-towns.

Newcastle, the chief town, Saturday.

Berwick f	Hexham tu
Alnwick f	Wooller th
Morpeth w	Belford tu
Rothbury th	Warkworth th

Nottinghamshire.

An inland county in the diocese of York, 90 miles in circuit, has a wholesome air, and different sort of soil; for the southeast parts are fertile, the western woody, and yield abundance of pit coal. Here is the famous forest of Sherwood. The Trent and the Iddle are its prime rivers. The first parts this county from Lincolnshire.

Market-towns.

Nottingham, the county-town, Wed. Fr. and Sat.

Newark w	Bingham th
Redford w	Worsop w
Mansfield th	Tuxford in the
Southwell f	Clay m.

Oxfordshire.

An inland county, in Oxford diocese, 130 miles round, has a sweet healthful air, a good soil for corn and fruit, and rich in pasture. Besides the Thames, composed of

Tame and Isis, that water this county, here is the Cherwell, Windrush, Evenlode, &c. Oxford is remarkable for a famous university, containing 20 colleges, and 5 halls, which are as follows,

University col.	Founded in	
Baliol		872 by the Saxon King Alfred.
Merton		1262. by John Baliol, King of Scotland.
Exeter		1274. by Walter de Merton, Bp. of Rochester.
Oriel		1316. by Walter Stapleton, Bp. of Exeter.
Queen's		1325. by King Edward II.
New		1340. by Robert Eglesford, B.D.
Lincoln		1375. by William of Wickham, Bp. of Winchester.
All Souls		1427. by Richard Fleeming and Thomas Rotheram, Bps. of Lincoln.
Magdalen		1437. by Henry Chichley, Archbp. of Canterbury.
Brazen-Nose		1459. by William of Wainfleet, Bp. of Winchester.
Corpus-Christi		1511. by William Smith, Bp. of Lincoln, and Sir Richard Sutton. Knt.
Christ-Church		1516. by Richard Fox. Bp. of Winchester.
Trinity		1549. by King Henry VIII.
St. John's		1555. by Sir Thomas Pope.
Jesus		1557. by Sir Thomas White, Lord Mayor of London.
Wadham		1571. by Queen Elisabeth.
Pembroke		1609. by Nicholas Wadham, Esq.
Worcester		1620. by Thomas Telsdale, Esq. and Richard Whitechurch, B.D.
Hartford		1700. by Sir Thomas Cooke.
		1740. by Dr. Newton.

Halls.		
St. Edmond's	}	Queen's
St. Alban's	}	Merton
St. Mary's	} belonging to	Oriel } College.
New Inn	}	New
Magdalen	}	Magdalen

Market-towns.

Oxford, the capital city,	Wed. and Sat.
Woodstock tu	Whitney th
Bandbury tu	Watlington f
Burford f	Chipping Norton f
Henley th	Deddington f
	Bicester f
	Bampton w
	Tame tu
	Charlbury f

Rutland.

An inland county, in Peterborough diocese, 40 miles in circuit. It yields plenty of corn and cattle, and feeds great numbers of sheep; the wool whereof (like the soil) is reddish, from whence this county is called Rutland; that is Red-land. Here is also plenty of wood, and several rivers; the principal of which are the Welland and Great Ouse.

Market-towns.

Oakhampton f | Uppingham w

Shropshire.

An inland county, in the diocese of Hereford and Litchfield, bordering upon Wales, is 135 miles in compass. Here the inhabitants breathe a good air, and have the benefit of a fruitful soil, though hilly on the south and west. It yields plenty of wheat and barley, pit coal, wood, and Iron. The rivers are the Roden, Tame, and Severn; which last runs through the county.

Market-towns.

Shrewsbury, the county town, Wed. Th. Sat.		
Bishopscastle f	Elismere tu	Wen the
Bridgnorth f	Whitchurch f	Churchstretton tu
Ludlow m	Newport f	Oswestry m
Wenlock m	Drayton w	Shipton tu

Somersetshire.

A maritime county in the west of England, and diocese of Bath and Wells, 240 miles round, is one of the largest counties, pleasant of corn and pasture, most pleasant in the summer, tho' but indifferent for travellers in the winter. Whence the proverb, Bad for the rider, but good for the abider. Besides the Severn, which runs into the Sea, there is the Avon, Frome, Parret, Tor, and Tone. The oxen in this county are as large as those in Lincolnshire, and the meat much preferable. This county yields also lead and copper, lapis calaminaris, chrystal that comes near a diamond, and wood for dyers. Its chief manufactures are woollen cloath and serges. At Cheddar they make the best and the biggest cheeses in England, as good as the Parmesan. The whole milk of the parish goes for the making of it, by agreement among the parishoners.

Market-towns.

Bristol, the capital, Wed. and Sat.		
Bath w and f	Axbridge th	Ranasham th
Wells w and f	Sheptonmallet f	Crookhorn f
Bridgwater th	Somerton m	Dulverton f
Ilchester w	Wellington tu	Glastenbury tu
Taunton w and f	Bruton f	Chard m
Wincanton w	Ilminster f	Longport f
Watchet f	Dunstar f	Poutford tu
Southpaterton th	Wivelscomb tu	Writon tu

Staffordshire.

An inland county, in the diocese of Litchfield and Coventry, 141 miles in circumference; the air is sharp and

healthful, the soil diverse: for northward 'tis hilly and barren, southward it yields plenty of corn and grass, iron and pit coal. The inland parts are level, but woody. Here is also good stone, marble, and alabaster.

Beside the Trent that waters northward, there is the Dove, Churner, Blithe, Line, Sow, and other small rivers, which make the neighbouring lands very fruitful, and the sheep that feed upon them some of the best mutton in England. Here are also some salt springs, little inferior to those in Cheshire.

Market-towns.

Stafford, the county-town, Sat.

Richfield tu and f	Ecclethall f	Betley tu
Newcastle m	Ridgley tu	Locke w
Burton th	Browly tu	Tudbury tu
Kenbridge tu	Breewood tu	Stow tu
Tuxeter w	Wallhall tu	Wolverhampton w

Suffolk.

A maritime county, south of Norfolk, and in Norwich diocese, 140 miles in compass. The air is wholesome, but the soil diverse: sandy and full of heaths towards the sea, but yielding plenty of rye, pease, and hemp, and feeding vast multitudes of sheep. Further from the sea are Woodlands, otherwise called High Suffolk, which breed abundance of cattle. But the most fruitful parts are about Edmonsbury. There are a great many parks in this county. Its principal rivers are the Stour, Creon, Deben, Orwel and Blith. Here is abundance of cheese made tolerable good, but Suffolk butter is counted excellent. Its manufactures are woollen and linnen cloth.

Market-towns.

Ipswich, the principal, Wed. Frid. and Sat.

Lowwich f	Stowmarket th	Lovenham tu
Worford m	Newmarket th	Mildenhall f
Borough f	Bedeles f	Biddestone w

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Sudbury f	Bury w	Clare f
Eye f	Hadley m	Bungay th
Dedington f	Framlington f	Holesworth tu
Ixworth f	Lestoff w	Mendlesham tu
Needham w	Neyland f	Woodbridge w

Surrey.

An inland county, which the Thames parts from Middlesex 112 miles in circuit, in the diocese of Winchester. 'Tis observed that the skirts of this county are the most fruitful; however in point of health, the middle parts have the advantage; both for the pleasure they yield by their Downs in hunting, and horse races. Besides the Thames, here is the Wye, which runs through Guildford, the Mole through Dorking, and the Wandle, all three into the Thames, the first two near Hampton Court, and the last near Richmond.

Market-towns.

Guildford, the county-town, Saturday	
Ringate tu	Kingston f
Southwark w and f	Croydon f
Dorking th	Farnham th

Warwickshire.

An inland county, in the diocese of Worcester, Litchfield and Coventry, is 135 miles in circuit, enjoys a good air; and plentiful soil, especially on the south, northward 'tis woody. Among its rivers Avon is the chief, which runs through the midst of it, and falls at last into the Severn. Its chief commodity is cheese.

Market-towns.

Warwick, the county-town, Saturday.		
Coventry f	Birmingham tu	Nuneaton f
Stratford th	Colehill w	Rugley f
Atherston tu	Henly m	Southam m
Alcester tu	Kyneton tu	Suttoncolefield m

Westmoreland.

Westmoreland, in the north west of England, partly in the diocese of Chester, and partly in that of Carlisle, is 120 miles in compass. It is hilly and marshy, but not without fruitful spots of ground, especially southward. But in general it is certainly the most barren and wild county in England. The Eden, Ken, Lon and Eamon are the principal rivers. Ulles water and Winander mere, are two lakes, the first bordering upon Cumberland, and the other upon Lancashire.

Market-towns.

Appleby, the county-town, Saturday.

Kendal f

Kirkby Steven m

Longdale th

Orton f

Burton th

Brough w

Ambleside w

Wiltshire.

An inland county in Salisbury diocese, 140 miles round, is a healthful county. Northward 'tis somewhat hilly and woody; but southward 'tis pretty level. In the middle of it is Salisbury plain, noted for its large extent, and for feeding innumerable flocks of sheep. Its principal rivers are the Isis, Kennet, Willy, and the Nadder. It has the chief manufacture of wool: the best broad cloths, both white and dyed, are made all over this county.

Market-towns.

Salisbury, the capital, Wed. and Sat.

Chippingham f

Crickdale f

Warminster f

Hindon th

Devises th

Bradford m

Wilton w

Downton f

Amsbury f

Marlborough f

Wesbury f

Auburn tu

B b

Wotton bassett th	Highworth w	Swindon m
Malmsbury f	Calne tu	Troubridge f
Lavington w		

Worcestershire.

An inland county in the diocese of Worcester, 130 miles in compass, yields plenty of corn, pasture, cattle, fish and fruit. The vale of Evesham is noted especially for its great fertility. Here are also several salt springs. Its rivers, the Severn, Avon, Salwarp, &c.

Market-towns.

Worcester, the capital, Wed. Frid. Sat.		
Stowerbridge f	Kidderminster th	Tidbury tu
Evesham m	Bromsgrove tu	Upton th
Bewdly f	Parshore tu	Shipton f
Droitwich f		

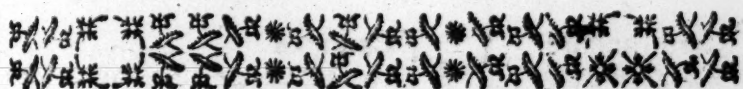
Yorkshire.

A northern maritime county in York diocese, is 320 miles round. 'Tis divided into three parts, the N. E. and W. Ridings, which last is the largest and most populous. 'Tis generally a most fruitful county, yielding plenty of corn, cattle, fish and wild fowl. Here are also abundance of fine horses, lime stone, jet, and allum. Sureby is noted for its goats, Sheffield for iron, Richmondshire for its lead, copper, and pit coal. Its principal rivers are the Humber, Aire, Chalder, Dun, Derwent, Nyd, Ouse, Swall, Youre, Waiff and Tees. This county is about the size of the dukedom of Wirtemberg in Germany; and bigger than all the seven United Provinces of Holland. The manufactures here are cloths, which of late are carried to great perfection.

Market-towns.

York, the chief town, Tuesd. and Sat.		
Kingston upon	Halifax th	Patrington f
Hull tu and f	Leeds tu and f	Hornsey f
Knarborough w	Bradford th	Burlington f
Rippon th	Aberford w	Scarborough th

Boroughbridge f	Sherborn f	Thriske m
Pontefract f	Selby m	Northallerton w
Sheffield tu	Tadcaster th	Richmond f
Rotherham m	Wetherly th	Whitby f
Doncaster f	Shipton f	Gisborough m
Tickhill f	Ripely f	Pickering m
Bawtry f	Beverly w and f	Yarum th
Barnesly w	Heydon f	Stocksley f
Wakefield th	Howdon f	Beddal tu
Huddersfield tu	Wighton w	Masnam tu
Snaith f	Malton tu and f	



II. W A L E S.

The principality of Wales, lyes on the W. of England (commonly reckoned a part thereof) bordering on the Irish sea, and parted by the river Dee, and a line drawn to the river Wye; in length from N. to S. about 124 miles, in breadth from E. to W. about 100.

It was first conquered by the Romans (about the same time that England was) and afterwards had a king of its own, and sometimes two, one of North and the other of South Wales; till at last the kings of England subdued them, and brought them under their power; so that it is at present under the kings of England, whose eldest son has the title of prince of Wales.

The inhabitants, as in the rest of England, are most Protestants, their language very harsh, being the same with the old British or Gallick, but the English is also much used among them; their chief commodities are cattle, butter, cheese, Welch-frizes, cottons, bays, herrings, hides, calves skins, honey, wax, and other such like. It is divided into two parts, which are;

1. North Wales, the seat of the old Ordovices, since the kingdom of Guinedth and part of Powisland; it contains six counties, which are,

1 Flintshire	} chief towns	{ St. Afaph and Flint
2 Denbighshire		{ Denbigh
3 Isle of Anglesey		{ Beaumaurish
4 Caernarvonshire		{ Caernarvon and Bangor
5 Merionethshire		{ Harlech
6 Montgomeryshire		{ Montgomery and Welshpool

St. Afaph is the chief town of the whole.

2 South Wales, the seat of the old Dimetæ, and part of the Silures, since the kingdom of Debenbarch, and part of Powisland; it contains six counties, viz.

1 Cardiganshire	} chief towns	{ Cardigan
2 Radnorshire		{ New Radnor
3 Pembrokeshire		{ Pembroke and St. Davids
4 Carmarthenshire		{ Carmarthen
5 Brecknockshire		{ Brecknock
6 Glamorganshire		{ Cardiff and Landaff

Pembroke chief of the whole.

Rivers of principal note are Wye and Dee.

Principal mountains are those called Snowdown hills, and Plinlimmon.

Archbishopricks 0, Bishopricks 4, Universities 0.



III. S C O T L A N D.

The kingdom of Scotland is the rest of the island of Albion or Great Britain, and lies on the north of England, from which it is parted by the rivers Tweed and Solway, and the Cheviot hills; in length from Dungsby head to the S. of Galloway 250 miles, in breadth from Aberdeen to the isle of Mull 150 miles.

The inhabitants are Protestants, and those chiefly Presbyterians; their language is in the south parts a corrupt English, and on the N. and W. parts a dialect of the Irish; their chief commodities are most sorts of fish

in great abundance, much linnen cloth and tallow, vast numbers of cattle and hides: as also excellent honey, lead, ear, iron, train oil, coarse cloths, frizes, &c.

It is divided into two { S. the Firth } { Edinburgh.
classes, viz. { N. the Firth } { Aberdeen.

South comprehends	Galloway	Kirkcudbright	
	Nithsdale	Dumfries	
	Annandale	Annand	W to E
	Eftdale with Eufdale		
	Liddisdale	Hermitage	
	Tiviotdale	Jedburgh	
	The Mers	Duns	
	Lauderdale	Lander	
	Tweedale	Peebles	E to W
	Clydisdale	Glasgow	
	Kyle	Ayr	
	Carrick	Burgenny	
	Lothian	Edinburgh	
	Stirling	Idem	
	Renfrew	Idem	
	Cunningham	Irvine	E to W
	Isles of { Bute	Rothsay	
North comprehends	Arran		
	Peninsula of Cantyr	Kilzeran	
	Fife	St. Andrews	
	Menteith	Dumblain	E to W
	Lennox	Dumbarton	
	Argyle	Inverara	
	Perth	Idem	
	Strathern	Abernethy	E to W
	Broadalbine		
	Lorn	Dunstaffnage	
	Merns	Bervy	
	Angus	Dundee	W to E
	Gaury		
	Athol	Blair	
	Mar	Aberdeen	W to E
	Badenough	Ruthven	
	Lochaber	Inverlochy	

N. comprehends	Buchan	Chief Towns	Peterhead	} E to W
	Bamfe		Idem	
	Murray		Elgin	
	Rofs		Tain	} S to N
	Sutherland		Dornock	
	Strathnaver		Strathy	
	Caithness		Wick lying N E. of Strathnaver	

These are the various divisions of Scotland, according to the best maps, and the manner how they are found. But since that kingdom is ordinarily divided into sheriffdoms, stewardries, bailiaries, and one constabulary, we shall also consider it in that respect; and seeing each of these sheriffdoms and stewardries, &c. comprehend either a part, or one or more of the said divisions, we shall here subjoin all the sheriffdoms and stewardries, &c. of the whole kingdom, and annex to each of them their whole content whether more or less. Therefore,

Sheriffdoms of Scotland are those of	Edinburgh	Containing	Middle Lothian
	Berwick		Meis and bailiary of Lauderdale
	Peebles		Tweeddale (dale)
	Selkirk		The forest of Ettrick
	Wigtoun		The N. and W. parts of Gal-
	Renfrew		Barony of Renfrew (loway)
	Lanerick		Clydsdale
	Dumbrilton		Lennox
	Bute		Isles of { Bute
	Stirling		Arran
	Linlithgow		Stirling, on both sides the river
	Clackmanan		West Lothian [Forth
	Kinross		The E. parts of Stirlingshire
	Coupar		The W. parts of Fife
	Forfar		The rest of Fife
	Kincardine		Angus, with its pertinents
	Elgin		Merns
	Nairn		The E. parts } of Murray
	Wick		The W. parts }
	Orkney		Caithness
			Isles of { Orkney
			Zetland

Sheriffdoms of Scotland are those of

Aberdeen cont.	{ Mar, with its pertinents Buchan Strathbogie	
Perth cont.	{ Perth Athol Gaury Broadalbine Menteith Strathern	{ As also { Glenshee Strathandal Ramach Balwidder Glenurquhy Stormount
Inverara cont.	{ Argyle Lorn Cantyr Isles W. of { Lorn Cantyr	
Bamfe cont.	{ Bamfe Strathdovern Boyn Enzy Strathawn Balveny	
Inverness cont.	{ Badenough Lochaber The S. parts of Ross Part of Murray beyond Nairn	
Tayne cont.	{ Sutherland Strathnaver	
Roxburgh cont.	{ Tiviotdale Liddisdale Efsdale with Eufdale	
Ayre cont.	{ Kyle Carrick Cunningham	
Dumfries Cromarty	{ cont. { All Nithsdale A little of Ross, S. of Cromarty	

Besides those Sheriffdoms, there are { Stewardries
Bailiaries
One Constabulary

Stewardries are { Strathern
Menteith
Annandale
Kirkcudbright } cont. { Strathern
Menteith
Annandale
E. and S. parts
of Galloway.

{ As also { St Andrews
Killimure
Abernethy } in { Fife
Angus
Perth.

Bailiaries are { Kyle
Carrick
Cunningham
Lauderdale } cont. { Kyle
Carrick
Cunningham
Lauderdale

The one Constabulary is that of Haddington, containing East Lothian

Principal rivers are Tay and Spey.

Mountains of greatest note, are the Cheviot hills, and those of Albany.

Chief lakes are Lomon, Ness, and Tay.

Archbishopricks 2, Bishopricks 12, and Universities 4.



IV. I R E L A N D.

The Kingdom of Ireland, an island lying on the W. of England and Wales; in length from the N. parts of Antrim, to the S. parts of Cork, 285 miles; in breadth from the E. parts of Down, to the W. parts of Mayo, 160 miles.

The inhabitants are both Protestants and Papists; their language, a dialect of the old British, intermixed with Norwegian, Danish, and English; the English is

also frequently used among them, and in some places a mongrel speech between both; their chief commodities are cattle, tallow, butter, cheese, honey, wax, salt, hemp, linnen cloth, pipe staves, wool, frizes, &c. It is divided into four provinces, which are,

1. Ulster, 2. Connaught, 3. Leinster, 4. Munster, or Mounster.

Rivers of note, are Shannon, Barrow, Shur and Blackwater.

Chief mountains are Knock Patrick, Slew Bloemy, and Curlew hills.

Lakes of greatest note are Lough Earn, Lough Neigh, and Lough Corrib.

Archbishopricks 4. Bishopricks 18. University 1.

Lesser British islands are,

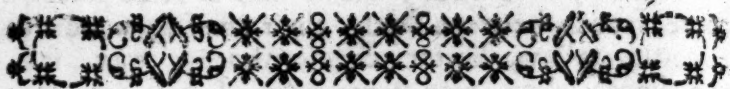
1. The Orcades, or Orkney islands, on the north of Scotland. The number of them is indeed very great, 26 of them are inhabited, and the rest called Holms, are used only for pasturage. Most of them are blest with a very pure and healthful air to breathe in, but their soil is very different, being in some extreamly dry and sandy, in others wet and marshy; however they are indifferently fruitful in oats and barley; the chief of them are Hoy, Mainland, Sapinsha, and Westra; the chief town is Kirkwall in Mainland. These islands have been visited by the Picts, and subject to the Danes; but Christian IV. of Denmark, having quitted all his pretensions to them in favour of James IV. of Scotland, they have ever since acknowledged allegiance to the Scots crown.

2. Zetland. Under this name are comprehended 46 islands, with 40 Holms, besides many rocks. Of these islands, about 26 are inhabited, the rest being used for feeding cattle. The chief of them are Mainland and Yell; the chief town is Ylesburg in Mainland.

3. The Hebrides. They surpass 300 in number, the most remarkable of which are Jona and St. Kilda.

4. Man on the west of England.

5. Wight on the south of England, &c.



T H E

Maragement of HORSES.

THE necessity every traveller lies under of having some knowledge of the art of managing his horse, and the many inconveniences frequently attending the want of this knowledge, are so evident, that nothing need be said to evince the usefulness of this article: I shall therefore without any further preamble, give a few hints to assist my readers in buying such horses as are fit for the road, and then treat of their management under the accidents and disorders to which they are liable.

As to the first part of this task, it is the more necessary, since whoever would buy a good horse, must know how to choose him himself, and never place the least confidence in the words of a jockey or-dealer in horses.

Rules for buying Horses.

IF a horse is young, his tusks will be sharp-pointed and grooved, or hollowed on the inside: but the jockies have the art of burning the corner teeth of an old horse, after they have been cut with a graver by which means they imitate the mark, and frequently deceive; yet the cheat is discoverable by other signs: as, when he has white eyebrows, he may be supposed to be about 15 or 16 years of age: the age of a horse may also be known by the length and yellowness of his teeth, the leanness of the roof of his mouth, and the narrowness of the under jaw.

But it is not sufficient that you are not deceived in buying an old horse for a young one, the eye is carefully to be examined, lest you should buy a horse that

is blind, or that has some defect in his sight. The best eye is of a hazel colour; and it is an advantage to have it rather large than small; the part commonly called the sight of the eye, should be perfectly bright and clear, without the least dimness, so that you may see the bottom, and the image of your face reflected from thence and not from the surface; and you should also observe if upon changing the situation of the horse with respect to the light you can discern the sight of the eye contract or dilate itself. This, added to the clear transparency already mentioned is a proof of the goodness of the eye.

But to proceed. Every man who buys a horse, should chuse one whose size and strength are in proportion to the weight he is to carry: but in general, a middle siz'd horse is best for the road, and one of 14 hands and an inch is of sufficient strength to carry any man under 15 stone.

After the jockey has exercised his horse before you, you should ride him yourself two or three miles on a rough, uneven road, when you should give him his head, without forcing him by whip or spur to perform with more life and spirit than he is otherwise inclinable; if he walks, trots and canters nimbly, without dwelling upon the ground, taking up his fore feet moderately high, stepping longer or shorter, according as he finds there is occasion, and going near before and wide behind, he is likely to carry his master well. But it must be remarked, that the best proof of the excellency of a road horse is his trotting down hill, where it is pretty steep; for if he is able to perform this well he is able to trot on any ground whatsoever.

Captain Burdon, in his Pocket Farrier, advises those that want to buy, to observe that the horses knees are not broken. This is a very good caution, and it is what all people are, or ought to be aware of; yet as one who is no common stumbler may have an accidental fall, you should observe whether the knees are covered with hard scars, which if they be, and the hair is curled about them, it is a certain proof of his being an old offender.

If a horse goes clean, it is a pretty sure sign that he

moves well upon his limbs; therefore when you see a person alight at an inn, with his boots tolerably free from dirt, you may almost venture to buy his horse without seeing him exercised.

The horse that has his breast full and prominent is very unfit for travelling; therefore, before you buy a horse, stand in a right line with his head, and mind that his breast don't keep his knees too far asunder, for the nearer he stands with his knees, provided he does not cut, the more reason have you to judge that he will travel expeditiously, therefore take particular notice that his breast be narrow, thin, and lean, his shoulder-points not projecting forwards, and his fore legs straight and almost perpendicular.

To conclude this article, there is scarce a better property in a horse than a sound, tough hoof, that will abide hard roads without much heating. A foundered hoof is very often long and deep, and shaped more like that of an ass than of a horse; but the good hoof is semicircular, and rather flat than otherwise.

Rules for travelling, with Directions for preventing and curing the Disorders Horses are incident to on the road.

WHEN you set out on a journey, observe whether the shoes be fast, whether they sit easy, or whether they do not cut either before or behind. If a horse cuts with bad thin shoes, he will probably do it when he is fresh shod; but this may sometimes be helped by a good smith.

Most of the disorders to which horses are subject are produced by the negligence or ignorance of the riders: and as they may be easily prevented by a proper care, they are cured without difficulty, if taken in time. It is true it is much more easy to prevent diseases than to cure them; for if a horse be well curried, brushed and wiped down with a cloth, morning, noon and night, and duly exercised and well fed, he will be seldom out of order.

The advantage of currying and rubbing down is inconceivable; it promotes a due circulation of the blood, opens the pores, and consequently prevents a stagnation of the fluids, promotes perspiration, and is the readiest way of preserving health.

The most common cause of grease and scratches, are the carelessness, the nastiness and indolence of the groom; for unless the blood is kept in a balsamic state by proper exercise, clean, sweet and liberal feeding, that fluid, from which all the humours in an animal body are derived, must consequently become depraved. As exercise ventilates the blood, so, keeping the skin clean and smooth, occasions an easy perspiration through the pores: for if after hard riding we suffer our horses to lye with the sweat drying upon them, we run the risk of a violent surfeit, which is in fact the cause of most of the distempers incident to either human or brute creatures.

As we have mentioned liberal feeding, it may not be improper before we proceed farther to mention what quantity of oats, &c. a man should allow his horse on the road.

A full sized horse that has a good appetite, and travels hard, may be allowed every day about six quarts of oats, half a pint of split beans, and a good handful of wheat mixed together.

What is here said with respect to the quantity of oats necessary for a sized horse, may be a sufficient guide as to what should be allowed those of fourteen hands or under; therefore I shall only add, that he who will not allow his horse the quantity of oats, &c. here mentioned, should ride slowly and make short stages.

As we have been just mentioning the quantity of corn necessary to be given to a horse on a journey, I shall give the young traveller some hints relating to his watering his horse on the road, and then proceed to give directions for the cure of those disorders which are occasioned by the want of following these rules.

When a horse travels he perspires very much, and may therefore be allowed to drink a little now and then, as opportunity offers, and this will greatly refresh him; but you should never let him drink much at a time, for

if you suffer him to drink his fill, he will become dull and sluggish; and besides, if he be very hot, it may be attended with very bad consequences. However, when you come within a mile and a half, or two miles of the place you intend to bait at, either at noon or night, he may drink more freely, going at a moderate trot afterwards, for by this means the water will be well warmed in his belly, and he will go in cool. Yet, carefully observe, that if there has been no water, or he has not drank on the road, never suffer your horse to be led to water, or to have his heels washed immediately after you arrive at your inn; but let him have water luke warm after he has stood some time in the stable; for much mischief has been frequently done by imprudent riders, who after having travelled hard, have let their horses drink as much as they would, just after going into the inn or town where they intend to lye.

These observations relating to currying, feeding and watering your horse, if carefully observed, will be of great service, and contribute more than any thing else to preserve him in perfect health

How to save a Horse's Back from galling.

Young horses that have not been used to have their backs pressed, are most subject to gall and warble, and therefore we cannot take too much pains in fixing the saddle and suiting it to the shape of the back, that it may bear as equally as possible upon all parts at the same time,

As soon as an inflammation is found to be coming on, which may be known by some places under the saddle sweating, or continuing moist longer than others, especially if the back be viewed some hours after the saddle has been taken off, these places should be eased by removing the stuffing, that the weight of the rider may press upon other parts that are not so much heated. Vinegar, urine, salt and water, &c. are frequently used to cool a horse's back that has been hurt by being overheated; but if the skin be broke in holes, it would be better to use equal quantites of spirit of wine and tinc-

ture of myrrh and aloes, with a little oil of turpentine, and bathe the place with it now and then. There will be small holes in these tumours (which are called warbles) before some people would imagine it; but if you use the said tincture, you may proceed on your journey; you ought however to look frequently at your horse's back, and not hing upon him so as to make the inflammation spread. It would also hasten the cure if you would every hour walk a while on foot, and bathe the horse's back with vinegar, or any thing else that is an enemy to putrefaction.

On the Navel-Gall.

THE swelling called the Navel-gall is a tumour on the vertebræ, or bones of the back, and is occasioned by a contusion of the saddle tree, which for want of stuffing the pannel, it has rubbed and frigg'd the horse's back. To prevent this you should frequently, when riding, put your fingers before and behind your saddle, to feel whether it pinches the horse, that you may remedy this disorder in time, by getting your saddle chambered, or hollowed, to prevent its pressing the grieved part. But when, through the negligence of the rider, the horse happens to be crush'd either before or behind the saddle, and that it swells much, you should, (as in all other tumours occasioned by bruises) endeavour to disperse it, by applying warm, greasy poultices, as scalded bran and hogs lard, boiled turnips, or the like. Tho' if the bruise be slight, it may yield to cold applications, as whites of eiggs, wheat flower, bole armoniac and vinegar laid thick upon a piece of leather, larger than the swelling, and renewed as it dries; but if the hurt be very slight, the humour may be dispersed by washing the place with vinegar, or salt and water.

How to cure a Crush on the Navel gall.

A Crush on the navel-gall frequently becomes what is termed an encysted tumor; the mater that

forms it is contained in a strong skin or bag; and this kind of swelling frequently remains for years after the hurt is received, unless they are carefully cut out by the farrier. The method of cure is to make a long incision, and to cut out the bag of matter, skin and all, and then to heal the wound with the following ointment.

The common Wound Ointment.

Take common turpentine, half a pound; honey, one pound and a half; Burgundy pitch, twelve ounces; and hogs lard, half a pound; melt these well together; and when it has been taken a while from the fire, stir in an ounce of French verdigrease in fine powder, and keep stirring till it is as thick as honey, or, till the powder cannot sink to the bottom.

Of swelled Legs.

SWelled legs in horses is one of their most common grievances, and it must be acknowledged that some are by far more apt to swell in the legs than others; but when a horse's legs swell and will not yield to good keeping, clean dressing, &c. without the help of medicines, the case is bad; but the following purge may be of service.

Take one ounce of common aloes, half an ounce of diapente, three drams of species-hicæ-picæ, one dram of diagridium, 100 drops of oil of aniseed, and as much treacle as will make it into a stiff ball, to be rolled in liquorish powder or flower of brimstone, and give the horse in the common way, working it off with warm water and oat meal, when the medicine begins to operate.

The above dose, with respect to the quantity of the aloes and diagridium, may be enlarged or diminished according to the horse's age and strength; but it is not safe to increase the diagridium above the quantity of two drams; but a horse that is lean and weak should only be once or twice purged with the following preparation,

and afterwards he should take strengthening medicines to restore his fibres to their natural tone and elasticity.

Take of succourine aloes, one ounce and an half; extract of cassia, one ounce; of senega in powder, three drams; cinnamon, cloves, nutmegs and galengal root, powdered, of each two drams; mix, and with as much syrup of roses-solutive as is necessary, beat the whole into a stiff mass to be formed into two balls, which are to be given the horse in a morning, washing him down with a little warm ale, keeping him from his meat at least half a day.

If your horse is strong and full of flesh, and really requires purging, he may in such case bear the common aloes: but it is a necessary caution, that when the first dose does not purge, a second should not be immediately given; for by this management many horses have lost their lives: and it is a general rule, always to keep under the common dose of any medicine, till we are thoroughly acquainted with the temperament and constitution of the creature we have to deal with.

Of the Scratches.

THE scratches are a painful distemper, and in many respects are agreeable to what is termed kided heels in human bodies; and this generally proceeds from the carelessness and nastiness of the groom; so the grease is mostly occasioned by his negligence, in suffering the scratches to grow to too great a height. Yet, according to Dr. Bracken, the scratches differ from the grease, in that the first require rest, a large stall, and proper ointment, whereas the grease (without the scratches) it better after moderate riding. Experience informs us, that motion prevents the closing of all kinds of wounds; and it is equally certain that an horizontal posture of the body or limb wounded, is greatly preferable to a depending one; for these reasons, a sore on the back part of the fetlock, the part where the grease and scratches happen, requires care and patience. For this reason, if a horse who has the grease or scratches, or wounds or swelling in the legs, will not lie down, he must ei-

ther be forced to it; or covered with a cloth and turned out in the day; for when a horse is turned out from a warm stable into a field, the coolness of the air causes such a contraction of the fibres and the muscular parts as puts a stop to the influx of the humours, by which means an inflammation and stagnation of the blood and juices are prevented; but before he is turned out, his heels ought to be well washed with warm water, and anointed with the following ointment.

An Ointment for the Scratches.

Take of white ointment, two ounces; Flanders oil of bays and quicksilver, each half an ounce: melt the white ointment a little, then stir in the oil of bays, and then stir in the quicksilver, and keep stirring till all be so cold that the last ingredient cannot sink to the bottom.

N. B. Before this ointment is applied the hair should be clipped away from the sores, the legs washed perfectly clean with pretty warm water, and the part well dried.

Dr. Bracken asserts, that inward medicines are not absolutely necessary in the cure of the scratches or grease, and assures us, that he durst undertake to cure these disorders sooner by turning out, good feeding, clean dressing, and letting the horse have a double stall in which he may lye at his ease, than by any other method whatsoever.

Of Gravel in the Hoof.

IF a smith drives a nail into the quick, it naturally becomes festered and inflamed, and the sand or gravel in the roads working up the nail hole, render him perfectly lame: and it is a general rule, that whenever any foreign matter happens to be lodged in any part of the animal machine, it should be taken out as soon and as carefully as possible. The greatest care should be taken not to cut, pare, or scrape the hoof more than is necessary, it being sufficient to cut away what is black

and discoloured, and then to dress the wound with the following balsam.

Vervain's famous balsam for curing Wounds or Pricks.

Take balsam of Peru, half an ounce; gum Benjamin, half an ounce; storax, three drams; succotrine aloes, three drams; choice myrrh, six drams; powder them; and after putting them into a wide mouthed pint gooseberry bottle, pour upon them one pint of rectified spirit of wine, and corking it loosely, set the bottle in sand in an iron pot over a middling fire, keeping the spirit pretty warm for 24 hours; after which you may keep it close stopped, and decant it off clear as you want it.

The method of applying this excellent composition, is, to dip into it a piece of lint or tow, and then fasten it on the part, cleared of the gravel, &c. and renew it as it grows dry. But if this cannot be easily procured, the part may be dressed with the following ointment.

An Ointment for a gravelled Horse.

Take of turpentine, two ounces; rosin and Burgundy pitch, of each an ounce; bees wax, an ounce and a half; fresh butter four ounces; French verdigrease finely powdered, half an ounce; clarify the butter, and after melting the hardest substances first, put in the other, and last of all the powdered verdigrease; and stir the whole about till it is almost cold, otherwise the ointment will be more sharp at the bottom than at the top.

On a Clap in the Back-Sinew.

A Clap, or more properly a strain in the back-sinew, is frequently occasioned by a horse's getting his foot into a hole in the road, when having a heavy load on his back, he often catches himself so hastily upon stumbling, that he strains the back sinew or tendon behind his fore leg. This disorder is frequently mista-

ken by the farriers for a shoulder slip: but captain Burdon gives a very good rule to distinguish the difference. If the back sinew be slipt, says he, the horse will lift his toe off the ground and step short; but if the shoulder, he will drag his toe as he walks.

The cure of a strain in the back sinew is best accomplished by cooling applications, and will be much sooner effected if your horse will lye down and ease his leg. When the disorder is slight, this alone will be sufficient.

A Cure for a Clap or Strain in the Back-Sinew.

Take four ounces of bole armoniac, and ten whites of eggs: stir these well, and add thereto as much strong red or white wine vinegar as will reduce it to the consistence of a pretty stiff poultice; and then after the leg has been well bathed and washed with warm water, and wiped dry with an easy hand, spread the preparation on thin leather all along the sinew and part affected. This must be repeated as it dries.

Sir William Parson's Receipt for the Cure of a Strain, either of the Back Sinew or the Shoulder.

Take common Barbadoes aloes, dissolved in as much hot water as will make it of the consistence of a plaister; when spread on a piece of thin leather, apply it to the part affected, and bind it easily on.

A Receipt for a Shoulder Slip.

Take oil of turpentine, two ounces; oil of swallows and petroleum, of each half an ounce; mix these together, and having heated the shoulder and opened the pores of the skin, by holding a flat iron pretty hot, at about a span distance, let it be well rubbed in.

Strains frequently happen on a journey, without any sensible heat or swelling, so that the part affected is frequently mistaken by the farriers; but in all cases of strains, it is absolutely necessary to suffer the horse

ther to rest intirely, or to make small and easy stages; for where accidents of this kind happen, nothing can be worse than motion. The common practice of rowelling for strains, according to Dr. Bracken, is of no real service; since, tho' the lameness goes off after rowelling, it is not the number of rowels, but the rest from business and the length of time that perform the cure.

Of Strains in the Fillets.

When a horse has a strain in the fillets, it may be known by his dragging his hinder feet after him, his hitting his toes on the ground, and his wriggling as if he would fall. The age of the horse and the violence of the strain will render the cure the longer in performing.

A Receipt for a Strain in the Fillets.

Melt some pitch, rosin, and turpentine together, and pour it all over the fillets pretty warm, and then clap over it a parcel of tow.

For Strains in the Fetlock.

Take the lees of wine, either red or white, or wine vinegar to the quantity of about half a pint, and add thereto one pound of common bole armoniac in powder; to these put the whites of six eggs; beat all well together, and apply it thick in the manner of a poultis, and renew it as it dries. If the powder be too much or too little for the wine lees, it may be altered so as to make it of the consistency of thick honey.

Of Windgalls.

THE cure of windgalls chiefly consists in cooling the parts, and suffering the horse to lye idle rather at grass than in the house. The above charge for strains in the fetlock may be of great service. Or, the fetlock joints may be rubbed now and then with tar.

Of Colds.

Colds generally proceed from giving cold water to horses, when hot, or in letting them cool too suddenly; and many horses have become phthisicky and even broken winded, by being rid, when in a sweat, belly deep in cold water. Colds generally affect those parts of the body which are most susceptible of impression, as the brain, lungs, and guts of animals; for when that matter which ought to be perspired, is retained in the blood, by the closing of the pores of the skin, nature endeavours to throw off what is hurtful, by other outlets, such as the nose, mouth, fundament, urine, &c. and therefore it is the business of the physician and the farrier to assist nature in promoting some of these discharges. And therefore when a cold is violent, as an over great fulness is brought on from the perspirable matter lodged in the veins being obstructed, bleeding must be highly proper. But there is nothing better for a horse that has got a cold, than the following cordial ball.

A cordial Ball for Colds, proper to prevent or cure most Diseases in Horses, when there are no symptoms of a Fever.

Take aniseed and caraway seed, finely powdered, of each one ounce; greater cardamum seed, half an ounce, flower of brimstone, two ounces; turmerick, in fine powder, one ounce; saffron, two drams; sugarcandy, four ounces; Spanish liquerish dissolved in hyssop water, two ounces; oil of aniseed, half an ounce; liquorish powder, one ounce and an half; wheat flour, as much as is sufficient to make all into a stiff paste; and when the whole has been well beaten in a mortar, it may be tied up in a bladder, and kept for use.

This ball, when used for a cold, must be dissolved in stale beer, milk-warm, and about one ounce for a dose, given twice a day for the space of a fortnight; or else,

instead of dissolving it, it may be put between his grinders, when you should let him chew upon it for an hour or two without eating hay or grass, and afterwards give him oatmeal and water lukewarm, stirring them gently about both before and after watering.

If a horse seems griped in the guts from the same cause, let him have the following warm drink given him.

A cordial Drink in a Cold.

Take two ounces of the above ball, half an ounce of grains of paradise, in powder, and a quarter of an ounce of long pepper, with a large nutmeg grated, and mix all up with a quart of strong, mellow ale, and give it the horse in a horn, and then keep him tied up from food for two hours; but first he must be rid about a little, on a full trot, to shake his guts, and let loose the imprisoned wind.

If the horse is bound in his body, about twelve hours after his taking the above cordial drink, you may give him the following clyster.

A Clyster for Griping in the Guts.

Take mallow leaves and pellitory of the wall (either green or dried) of each three handfuls, caraway seeds bruised, and aniseeds, of each one ounce, ground ginger, half an ounce, the electuary called caryocostinum, one ounce; boil the herbs and seeds well in two quarts of water, to three pints, then add the ginger and the electuary, and put a quarter of a pound of fresh butter, and one ounce of Epsom salt to the whole. Let this be injected very warm, and the horse's tail tied down between his thighs for a good while.

In case the guts are actuated with painful twitches and convulsive contractions, which makes the horse tumble about and strike his feet against his belly, to the above clyster may be added, half an ounce of philonium romanum.

These remedies, together with care and patience, warm mashes of malt, bran, and the like, will restore your horse to health; but observe that he ought to have a wide stall, and clean, warm bedding.

Another excellent Receipt for the Cure of Gripes.

Take twenty grains of London laudanum, dissolve it in an ounce of brandy, then mix it with a pint of white wine, and add two ounces of diascordium; give it your horse in a horn milk warm, and clothe him well. Let him rest twenty four hours after it, and drink plentifully of warm water and oatmeal, for he will be very thirsty the day after he has taken it.

On Scouring or immoderate Purging.

Scouring or purging on the road may be remedied by keeping the horse to dry food and less water than common; but this must be continued for a long time with proper exercise, and a full allowance of oats and split beans.

A horse of a lax constitution being taken from grass to go a long journey, should have the following preventive physic given him in his provender.

A Powder against Scouring or over Purging.

Take galls, powdered (such as we make ink with) two ounces, and of the powders of Japan earth and Lemnian earth, of each an ounce; mix, and keep them in a bladder for use. The method of using it is to sprinkle a little water upon the horse's oats, and after rubbing them a while to throw amongst them half a spoonful of the powder.

If a horse from foul feeding, catching cold, &c. purge upon the road, give him the following drink.

A Drink for a Horse which scours from foul feeding, &c.

Take one ounce of Venice treacle, boil it in a quart of stale beer till one third is evaporated, then add half an ounce of true Armenian bole in powder, and two ounces of common treacle to make it palatable; then give it the horse in one dose, and repeat it as necessity requires. If it be too weak to overcome the distemper, an hundred drops of liquid laudanum, and half a gill of strong cinnamon water may be added; but in the last case he should not travel for some days.

On a Cold in the Head.

When the brain is much loaded from the cold, take some of the following powder, and blow it through a piece of elder wood, pretty high up the nostrils.

A Powder to make a Horse's Nose run in a Cold.

Take assarabacca * dried, half an ounce, and of the powder of margerum, one ounce, mix these together, and blow it up the horse's nostrils twice or three times a day, keeping his head and throat well covered, to prevent his getting more cold.

As the eyes are subject to various accidents on the road, particularly from the cut of a whip, a remedy for these disorders cannot be unnecessary. All wounds on the eye, if curable, will yield to the following application.

A Receipt for Curing Wounds on the eyes.

Take half an ounce of the greyish coloured lapis ca-

* This is an herb shaped like the garden scurvy grass, only it is larger, and of a darker green.

laminaris, finely powdered, of lapis tutiæ, two drams, of white vitriol, burnt, one dram and a half, and about one-scruple of French verdigrease, reduce these into a fine powder, and mix them well with about one ounce of fresh butter. When you make use of it, warm this ointment, dip a feather in it, and apply it morning and evening to the sore. This must be continued for a good space of time, because wounds on the eyes are long in healing.

Or when the horse's eye happens to be hurt with a lash of a whip or itwig, you may blow in the following powder night and morning.

For a Hurt on the Eye.

Take of lapis calaminaris and lapis tutiæ, finely powdered, of each two drams, white vitriol and allum, first powdered and then burnt together in a very clean, red-hot fire shovel, each half an ounce, mix all these together, and keep the whole in a bottle well corked; but observe, that the bottle ought not only to be dry, but well warmed before you put it in.

If the eyes be rheumy and bloodshot, and the horse has symptoms of pain in his head, bleeding will be necessary, and the following eye water may be applied.

An excellent Eye-Water.

Take four ounces of rose water, and about three drams of the aforesaid eye-powder mixed and dissolved in it; squirt it into the eyes by the help of a syringe.

The water is best for rheumy bloodshot eyes, where there is no speck or film; and the powder where there is; but observe the eye always looks worse while the powders are using.

A Cure for a Swelled Neck.

When a horse's neck happens to swell by getting cold after bleeding, the following softening poultice is the best remedy that can be applied.

Take mallow and marsh mallow leaves picked clean from the stalks, of each ten handfuls, white lilly roots, half a pound; lintseed and fenugreek seed, of each two ounces, ointment of marsh mallows, six ounces, and of hogs lard, half a pound. The leaves and roots should be boiled well, and the water pressed from them; then beat them up to a pulp in a mortar, and let it stand till you have made a jelly of the seeds by bruising them well, and boiling them in a quart of water to a pint; this you must beat up with the former; and lastly add the ointment and hogs lard, and when all are mixed thoroughly, it may be kept in a large bladder or pot for use.

This is an excellent poultice for all hard swellings, either in man or beast: when applied, it should be warmed well before the fire, spread thick over a piece of flannel applied all over the tumour, and renewed as it becomes dry.

If a swelling of a horse's neck, after bleeding will not disperse, it should be opened when sufficiently soft, and dressed with the common wound ointment, before recommended for healing the navel gall, and the poultice continued till the hardness is dissolved.

When a horse is under cure for these kind of swellings, it is best to give him mashes of malt, warm grains, and warm water, with a good deal of oatmeal in it, and if he will eat a little hay, it should be sweet, soft, meadow hay, sprinkled with cold water; or, in summer cut grass.

A Receipt to cure Worms.

The best remedy for the cure of worms is æthiops mineral, which ought to be thus prepared. Take four ounces of flower of brimstone, and the like quantity of

quicksilver; melt the brimstone slowly in an iron laddle, and stir in the quicksilver over a gentle heat, till it is incorporated; then take it off, and stir it till almost cold; afterwards stir them well together in an iron or stone (not a brass) mortar, till they become a black powder. Give the horse as much as will lie on a half crown piece twice a day in his corn, which must be first wetted to make the powder stick to it. This medicine must be continued a week or longer.

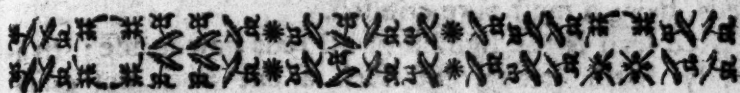
A Remedy for the Gravel.

If your horse has the gravel in his kidneys, ureters, or bladder, he will seem weak in the fillets, stale often, and with difficulty, and but little at a time.

Take an ounce and an half of the cordial ball above mentioned: sope of tartar, one dram; of Matthew's pill, one dram; or if the horse be lusty and strong, a dram and a half; beat those well together, and with liquorish powder make it up into two balls, and mixing it with a little stale beer and some treacle, give it for a dose out of a horn.

This medicine, if the symptoms are violent, may be repeated once in twenty four hours; and every two or three hours water lukewarm should be offered him.





T H E

ART of PAINTING in Oil.

To which is added, the whole Art of Gilding with Gold and Silver, mixing Water-Colours, &c.

A Catalogue of the several Colours used in Painting with Oil.

W H I T E S.

THE principal of all whites is white lead.

Of this colour there are two sorts, the one called ceruse, which is the most pure and clean part, the other is called by the plain name of white lead.

Besides white lead and ceruse, there is another sort to be met with sometimes, which they call flake white.

B L A C K S.

Lam black.

Lamp, or candle black.

Ivory black.

Willow charcoal.

R E D S.

Vermilion is the most delicate of all light reds, being of itself a perfect scarlet colour.

Lake, especially the richest sort, is the best of all dark reds, being a most pure crimson.

Red lead is the lightest of all reds now in use; 'tis a sandy, harsh colour, and such a one as is not easily ground very fine, altho' you bestow much Labour on it.

Spanish brown is a dark, dull red, of a horse-flesh colour, 'tis an earth, it being dug out of the ground, but there is some of it of a very good colour, and pleasant enough to the eye, considering the deepness of its colour: it is of great use among painters, being generally used as the first or priming colour, that they lay upon any kind of work, being cheap and plentiful, and a colour that works well, if it be ground fine, as you may do with less labour than some better colours do require; the best sort is the deepest colour, and freest from stones; the other sorts are not so good to give a colour to the eye, but yet they serve as well as any others for a priming colour.

Y E L L O W S.

Yellow oaker is of two sorts, one called plain oaker, and the other spruce oaker, the one is a much lighter colour than the other.

Pink yellow.

Orpiment is that colour which some call yellow arsenick.

Massicote is a good light yellow for most uses, especially in making greens, of which several sorts may be framed out of this colour being mixed with blue.

G R E E N S.

Verdigrease is the best and most useful green of all others.

Green bice is of a sandy nature, and therefore not much used; green verditer is also a sandy colour, neither of them bear any good body, and are seldom used but in landskips, where variety is required.

B L U E S.

Blue bice bears the best body of all bright blues used in common work, but 'tis the palest colour.

Blue verditer is a colour of no good body, but something sandy, and of no very good colour itself, being apt to turn greenish, and being mixt with a yellow makes a good green.

Indigo in a dark blue, if worked by itself; to remedy which, whites are usually mixt, and then it makes but a very faint blue.

Note, That the longer this colour is ground, the more beautiful and fair it looks.

Smalt is the most lovely blue of all others.

Note, That of this colour there are two sorts, the finest is that which is called oil smalt.

Umber is a colour that really has no affinity with the others above mentioned, being neither white, black, red, yellow, blue or green, yet it is a colour of as great use as any of the rest in common painting.



How to make a SIZE for the Gilding both with GOLD and SILVER.

THE operation is thus, for the making of gold size: take yellow oaker, and grind it on a stone with water till it be very fine, and afterwards lay it on a chalk stone to dry; this is the common way: or you may wash your oaker, for when it is washed, to be sure nothing but the purest of the colour will be used; and besides 'tis done with less daubing.

When your oil and oaker are thus prepared, you must grind them together as you do other oil colours, only with fat drying oil, but it is somewhat more laborious, and must be ground very fine, even as oil itself: for the finer it is the greater lustre will your gold carry that is laid on it.

Here note, that you must give it such a quantity of your fat oil, that it may not be so weak as to run when you have laid it on; nor so stiff that it may not work well; but of such a competent body, that after it is laid on, it may settle itself smooth and glossy, which is a chief property of good size.

Silver size is made by grinding white lead with fat drying oil, some adding a little verdigrease to make it bind.

The practice of working oil colours, and painting timber-work, after the manner of common painting.

THAT which I here call common painting is only the way and manner of colouring all manner of wainscot, doors, windows, posts, rails, pails, gates, border-boards for gardens, or any other materials that require either beauty or preservation from the violence of rain, or injury of weather; the method of doing which, I shall lay down as plain as I can. Suppose then, that there be a set of palisadoes, or a pair of gates, or some posts and rails to paint, and I would finish them, in a stone colour; first look over the work, and take notice whether the joints be open in the gates, or whether there be any large clefts in the posts, for if these are not secured the wet will insinuate itself into those defects, and make the quicker dispatch in ruining the whole work; let the first business therefore be, to stop up these places smooth and even, with a putty made of whitening and linseed oil, well beaten together on the grinding stone, with a wooden mallet, to the consistence of a very stiff dow, and with this let all the crannies, clefts, and other defects be perfectly filled up, that it may be equal to the surface of the stuff; then proceed to the priming of the work with some Spanish brown well ground and mixt very thin with linseed oil; with this do over the work, giving it as much oil as it will drink up; this in about two days will be indifferent dry, then if you would do the work substantially, do it over again with the same priming colour; when this is thorough dry, then take the white lead well ground and tempered up, not too thin, for the stiffer you work it, the better body will be laid on, and the thicker coat of colour that your timber is covered withal, the longer it will last; let this colour be well rubbed on, and the whole surface of the work be so intirely covered, that there remain no creek nor corner bare, which you may easily do by jobbing in the point of a bristle brush; let this first colouring dry, and then go over it a second time, and if you please a third also; the charge will be a little more, but the advantage will be much more great.

This course is sufficient for any kind of timber work that requires only a plain colour; whether you thus cover the work with a stone colour, or else with a timber colour in umber and white, or a lead colour in indigo and white, that with white being the cheapest of the three by much; nay, I have known some lay over their work only with a coat of Spanish brown, by tempering it up more stiff than was done for the first two primings, which in some respects is cheapest of all, and preserves the timber perhaps as well as any. Now he that is able to bring the work thus far on has proceeded to the highest pitch of that common painting that aims at preservation beyond beauty, though something of beauty is necessarily included in this also; but this is not all, for he that is arrived thus far, is in a fair way to other perfections in the art of painting: but for the pannelling of wainscot with its proper shadows, and for imitating olive and walnut wood, marble and such like; these must be attained by ocular inspection, it being impossible to deliver the manner of the operation by precept without example, and I am bold to affirm, that a man shall gain more knowledge by one day's experience than by a hundred spent to acquire it in some other way.

I advise therefore all those that desire any insight into this business, to be a little curious, if opportunity offers, in observing the manner of a painter's working, not only in grinding his colours, but also in laying them on, and working them in; in all these observing the motion of his hand, in managing of any kind of tool, and by this means, with a little imitation, joined to the directions here given; I doubt not but in a short time you may arrive to great proficiency in the business of common painting.

Note, That if when you have made use of your colours, there be occasion for a small cessation till the work be finished; in this case 'tis best to cover the colour in your pot with water, for that will prevent their drying, even in the hottest time.

And for your pencils they ought, so soon as you have done working, to be well washed out in clean lintseed-oil and then in warm soap suds; for if either oil or

colours be once dried in the brush or pencil, 'tis spoiled for ever.

It has been observed, that timber laid over with white, when it has stood some time in the weather, the colour will crack and shrink up together, just as pitch does, if laid on any thing that stands in the sun; the cause of this is, that the colour was not laid on with a stiff body, able to bind itself on firm and fast.

If you shall at any time have occasion to use either brushes that are very small; or pencils, as in many cases there will be occasion, you ought then to dispose of the colours you use upon a pallet (which is a wooden instrument, easy to be had at any colour-shop) and there work and temper them about with your pencil, that the pencil may carry away the more colour; for you are to note, that if a pencil be only dipt into a pot of colour, it brings out no more with it than what hangs on the outside, and that will work but a little way, whereas if you rub the pencil about in the colour, on the pallet, a good quantity of colour will be taken up in the body of the pencil; and besides all this, you may work your pencil better to a point on a pallet, than you can do in a pot; the point of a pencil being of greatest use in divers cases, especially in drawing of lines and all kind of flourishing.

What COLOURS are most suitable, and set off best one with another.

BY setting off best, I mean their making each other look most pleasant, for two of some particular colours put together, or one next the other, shall add much to the beauty of each other, as blue and gold, red and white, and such like: but green and black put together, look not so pleasant, neither do black and umber, or haw colour, and such like.

All yellows then set off best with blacks, with blues, and with reds.

All blues set off best with whites and yellows.

Greens set off well with blacks and whites.

Whites set off well enough with any colour.

Reds set off best with yellows, whites and blacks.

Gold looks well upon a white ground, especially if the matter to be gilt be craved.

Gold and black shew also very well.

Gold on timber colour shews also very well.

So does gold and horseflesh colour, made with the brightest Spanish brown.

But the most glorious ground of all others for gold are the vermilion red, the smalt blue, and the lake, laid on a light ground.

Of some colours that arise from mixture.

Ash-colour is made of white lead and lam black; if a deep ash colour, then take the more black, but if a light one, then take but little black, and most white.

A lead colour is made of indigo and white.

A colour resembling new oaken timber, is made of umber and white lead.

A flesh colour is compounded of lake, white lead, and a little vermilion.

A buff colour, take yellow oaker, and white lead.

For a willow green, take verdigrease alone.

For a light willow green, take verdigrease and white.

For a grass green, take verdigrease and pink.

A carnation is made of lake and white.

Orange-colour, yellow oaker and red lead.

A light timber colour, mix spruce oaker and white, and a little umber.

Brick-colour, red lead, a little white and yellow oaker.

For a straw-colour, take white and a little yellow oaker.

Olive wood is imitated with oaker and a little white veined over with burnt umber.

Walnut-tree is imitated with burnt umber, and white, veined over with the same colour alone, and in the deepest places with black.

Pails and posts are sometimes laid over only with white, which they call a stone colour.

Sometimes posts and pails are laid over with indigo and white, which is called a lead colour.

Window frames are laid in white, if the building be new, but if not then they generally are laid in lead colour, or indigo and white, and the bars with red lead.

Doors and gates, if painted in pannels, then the shadow of a white ground are umber and white, but if laid in a lead colour, then the shadows are lifted with black.

'Tis not possible to set down all those varieties of colours that may be produced by mixture; they that would see more, may peruse Dr. Salmon's polygraphice, where they shall find great variety. But those which I here have given an account of, are sufficient for common painting.

How to gild with GOLD on an oily Size, either Letters or Figures, &c.

WHATsoever you would gild must first be drawn with gold size (the making of which has been mentioned) according to the true proportion of what you would have gilt, whether figure, letter, or whatever else it be; when you have thus drawn the true proportion of what you would have gilt, let it remain till it be sufficiently dry to gild upon, which you shall know by touching it with the end of your finger; for if your finger stick a little to it, and yet the colour come not off, then it is dry enough; but if the colour come off on your finger, then it is not dry enough, and must be let alone longer; for if you should then lay your gold on, it would so drown it, that it would be worth nothing; but if your size should be so dry as not to hold your finger as it were to it, then it is too dry, and the gold will not take; for which there is no remedy but new sizing; therefore you must watch the true time that it be not too wet or too dry; both extremes being not at all convenient.

When your size is ready for gilding, take your book of leaf gold and opening a leaf of it, take it out with your cane plyers, and lay it on your gilding cushion, and if it lie not smooth, blow on it with your breath, which

will lay it flat and plain, then with a knife of cane, or for want of it, an ordinary pocket knife, that hath a smooth and sharp edge; with this being wiped very dry on your sleeve that the gold stick not to it, let your leaf-gold be cut into such pieces, or forms, as your judgment shall think most suitable to your work.

When you have thus cut your gold into convenient forms, then take your gilding pallet, ('tis a flat piece of wood, about three inches long, and an inch broad, upon which is to be glewed a piece of fine woollen cloth of the same length and breadth) and breathe upon it to make it dampish, that the gold may stick to it; with this tool take your gold up (by clapping it down on the several pieces you had before cut into forms) and transfer it to your size, upon which clap it down according to discretion, and your gold will leave your tool, and cleave to your size; which you must afterwards press down smooth with a bunch of cotton, or a hare's foot; and this you must do piece by piece till you have covered all your size with gold; and after it is fully dried, then with your hare's foot brush off the loose gold, so will your gilding remain fair and beautiful.

If your work to be gilt be very large, open your book of leaf-gold, and lay the leaf down on your work without cutting of it in pieces, and so do leaf by leaf till you have covered quite over what you intend to gild: and if some particular places should miss there, take up with a small bunch of cotton a piece of leaf-gold, cut to a fit size, and clap it on, that the work may be entirely covered; and if the gold be to be laid in the hollows of carved work, you must take it up on the point of a camel hair pencil, and convey it in, and with the said pencil dab it till it lye close and smooth.

How to Gild with SILVER.

IN laying on silver upon an oily size, the same method in all respects is required as for gilding with gold; save only in this, that the size upon which silver is laid

ought to be compounded of a very little yellow oaker, and much white lead; for the size being of a light colour, the silver laid on it will look more natural, and retain its own colour better, the whiter the size is.

Note, That the common painters do now generally in gilding use more silver than gold, in most works that are not much exposed to the air, to which they afterwards give the colour of gold, by means of the lacker-varnish, whose use is now so common, that if they gild any thing that stands free from the weather, they only gild with silver, and so give it the colour of gold with a lacker-varnish, made of gum-lack, dissolved in spirit of wine and laid over it.

Some DIRECTIONS for mixing of Oil Colours for divers Purposes, in the Art of Colouring Prints with Oil Colours.

Colours for several Faces.

FOR faces that are accounted fair, take white lead, a little vermilion and a very small touch of lake.

For the lips take more of the vermilion and lake than you did for the face.

For a brown face, take burnt oaker and white.

For a tawny Moor, take cullens earth, a little burnt oaker, and a little white.

Colours for Hair.

For a brown hair, mix umber and a little black and white.

For a yellow hair, take stone oaker, white lead and a little vermilion.

For flaxen hair, take white lead, stone oaker, and a little cullens earth.

Linnen is done with white lead and ceruse.

Silver is done with white, a little smalt, and some white masticote

Gold is done with red orpiment and white masticote, of each an equal quantity.

Colours for Garments.

For blue garments the best smalt and white lead.

For a grass green, mix verdigrease and a little pink-yellow.

For a willow green, mix verdigrease and a very little white.

A sea green is made by mixing green verditer, pink, and white lead.

A French green is made by mixing pink and indigo.

A carnation by mixing lake and white lead.

A crimson is made by mixing vermilion, lake and white.

A scarlet is only vermilion laid on alone.

A cherry colour is made by mixing vermilion and white lead.

For yellow, lay on either yellow orpiment, or yellow masticote; if your yellows are more pale, then mix white with the former.

For an orange colour, mix red orpiment and a little vermilion.

For a purple, mix smalt, lake and white.

For a violet, mix bice and lake.

A straw colour is made with white and yellow oaker, and a very little umber.

An ash colour is made by mixing black and white.

A chesnut-colour is made by mixing umber, lake and white.

A dove colour, or the wings of an angel, take white, a little lake, and a little smalt.

Colours for Trees.

For the bodies of trees, yellow pink, white lead, yellow oaker, and a little black.

For the leaves of them that are near the eye, take verdigrease and pink, or if darker coloured, then take indigo and pink.

For leaves of trees farther off, take green verditer, pink, and white lead.

For them that are farthest of all, take terra-verd and white.

Colours for Grounds behind a Picture.

Note, That a light hair requires a dark ground, and a dark hair a light ground.

Ground colour for a picture with a light hair is made with umber, white and black.

A ground colour for a dark hair is made with umber and white.

For Ground in a Landskip,

Take pink, oaker and white, with a little green verditer.

For country houses at a distance, take white lead, yellow oaker and smalt; the same colour serves also for houses of stone.

For buick-houses or walls, take yellow oaker burnt, and white lead, if the work be far off, but if near, then Indian red, and a little white.

For pails of wood or other timber work, of what kind soever, in country cottages, take umber, white, and a little oaker.

Sky colours,

Are made of smalt and white for the highest skies, more white for the lower, and yellow mixt with a little vermilion for the lowest of all.

The whole Art and Myſtery of colouring Maps, and other Prints in Water-colours.

HAVING, as yet, ſeen nothing published upon this ſubject that is authentick, I have thought fit, for the ſake of thoſe that are inclined to ingenuity, to ſet forth the way and manner of doing this work, it being an excellent recreation for thoſe gentry, and others, who delight in the knowledge of maps; which by being coloured, and the ſeveral diviſions diſtinguiſhed one from the other, by colours of different-kinds, do give a better idea of the countries they deſcribe, than they can poſſibly do uncoloured.

Now to perform this work after the beſt manner, there muſt be provided in the firſt place a lye made with tartar and gum water.

To make the tartar lye, do thus, take two ounces of the best white tartar, which is a stonny substance that sticks to the side of the wine vessels, and is sold by the druggists. Wrap it up hard and tight in half a sheet of brown cap paper, wet it thoroughly in water, and put it into a clear fire either of wood or sea coal; let it remain therein till it be red hot quite through, then take it out with a pair of tongs, and put it immediately into a pint of water, and with your fingers rub it well to pieces; put it into a long narrow glass, and in a day or two the black will all settle, and the lye will become pure and clear; pour off the lye into a clean glass, and keep it close stoppt for use.

To make gum water, take three ounces of the whitest and clearest gum arabick, which is also sold at the druggists, and beat it as small as you can bruise it; then put it into a pint of fair spring water, and let it dissolve therein, which will be much hastened by shaking the glass three or four times a day very well, that the gum that is dissolved may mix the better with the water that is above it; and, when it is all dissolved, if there appear any foulness in it, strain it through a rag into a clean earthen-dish, and put it into a glass, and stop it up for use. Note, That too much of this ought not to be made at a time: for if the gum be kept dissolved too long in the water, it will rot, and so be of no use; therefore observe to make it fresh once in two months, or three at the farthest.

In the nex place, you must prepare or make your colours ready for use, and the best for this work are those that follow; Namely,

Copper green, and that is made thus, take a pound of right French verdigrease made at Montpelier, this being the best, for the verdigrease made at any other place will fade. To this add three ounces of cream of tartar, beat them both into a fine powder, and take care, while the verdigrease is in the pounding, to stop your noise, and hold a bunch of fine linnen in your mouth to breath through, else the subtle powder of the verdigrease will be apt to offend; and when this is done, mix both the powders into two quarts of water, and boil it in an earthen pipkin till it boil away a quart, then strain it out when cold, and put the liquor into a glass, stop it up,

and let it stand to settle till the liquor be very clear, for you will have a delicate green; but sometimes the verdigrease not being always of a goodness, the colour may not be deep enough for some uses. In this case, put some of it into a broad earthen dish, and set it over a chaffing dish of coals, and by a gentle heat, diminish so much of the liquor till by trying on a paper, and letting of it dry, the colour please you; and here you are to note, That if it shine too much when dry, it is not right: for it is not rightly made except it but just shine, and if you cannot make the colour deep enough by evapourating by heat, the abounding liquid, without making it shine too much, it were better to add some more verdigrease, and boil it up a-new till it become a transparent deep willow green. If you would make but a pint of this, you must take but half the quantities of each; and you are also to take notice, that this is a colour that will keep many years without decaying, if the glass that contains it be close shut up.

The next colour needful to be made, is a stone colour, or a liquor of myrrh, which is thus done; take a pint of your tartar lye, and add to it an ounce of the best myrrh in powder, which you can get at the druggists, and boil it till the myrrh is dissolved, which will be done in a small time; let it settle, and pour off the clear for use, which you must keep close stopt up; this is also a tincture that will never decay, and may be made fainter or deeper by boiling more of the liquor away to make it deeper, or by adding water to it to make it fainter.

And in the last place, there is required a crimson colour, which is speedily made thus: Buy at the druggists some good cochineal, about half an ounce will go a great way. Take thirty or forty grains, bruise them in a galley-pot to fine powder, then put to them as many drops of the tartar lye as will just wet it, and make it give forth its colour; and immediately add to it half a spoonful of water, or more if the colour be yet too deep, and you will have a delicate purple liquor or tincture. Then take a bit of allum, and with a knife scrape very finely a very little of it into the tincture, and this

will take away the purple colour, and make it a delicate crimfon. Strain it thro' a fine cloth into a fine galley-pot, and use it as soon as you can; for this is a colour that always looks most noble when soon made use of, for it will decay if it stand long.

Indigo is another colour used in colouring maps.

This is bought at the colour shops that sell paint, and it must be ground very fine on a stone, as you do oil colours, with a little tartar-lye to make it give its colour, and look the brighter, when 'tis ground perfect fine like a thick syrup, add gum water to it till it be thin enough for your purpose, and keep it in a glass close stopt up, but it will settle so, that when you use it you must stir it up from the bottom.

For a yellow, gumboge is the best, it is sold at the druggists in lumps, and the way to make it fit for use is to make a little hole with a knife in a lump, and put into the hole some water, stir it well with a pencil till your water be either of a fainter or deeper yellow, as your occasion requires, then pour it into a galley-pot, and temper up more, till you have enough for your purpose.

Red lead is also a colour much used in this work, and so is orpiment; both which you may buy at the colour shops finely ground, so that they need only to be tempered with gum water to be fit for use.

Blue bice is also used often, which needs only to be tempered with gum water, and when men design to be curious, they may use instead thereof ultramarine, which is the best and most glorious of all blues, but vastly dear; yet small papers of it about two shillings price may be bought at some colour shops, which if carefully used, will go a great way; it needs only to be tempered in a very small galley-pot, with some gum water, till it lie on the paper a good colour.

There is likewise an exceeding glorious red or crimfon colour, named carmine, which is exceeding dear, yet about half a crown's worth will go a great way in the uses to which it is put; it is tempered with gum water and gives several degrees of colour according as it is thicker or thinner tempered.

Vermilion is also used in some cases. This is a glo-

rious scarlet, and needs only to be tempered with gum water, for it may be bought very finely ground to powder at the colour shops; only it is to be noted, that this colour shews much brighter when dry, if glazed over with some thick gum water, which is made by putting two ounces of gum arabick to half a pint of water, or less.

And for some purposes burnt umber, ground very fine with water as thick as possible, and then tempered up with gum water to a due thickness, makes a good transparent colour.

There is another colour needful in this work, which is a most pleasant grass green, and that is made thus, take a lump of gumboge, and make a holl in it, then put therein some copper green, stir it about with a pencil, and from a willow you will see it turn to a grass green, which you may make deeper or lighter as you stir it about a longer or lesser time.



Of the Practice of Colouring Maps.

THE colours being prepared as is before directed, the only way to colour maps well, is by a pattern done by some workman, of which the Dutch are esteemed the best; three or four such maps coloured by a good artist, are sufficient to guide a man in the right doing of his work; but if he cannot obtain this, he may by a few trials grow a good artist in a short time; for this is only attained to by practice, and if a man spoil half a score maps in order to get the knack of colouring a map well at last, there's no man that is ingenious will grumble at it.

The art of colouring right may be obtained by practice, as was said, but the hardest thing is to know rightly how to make and prepare the colours properly, without suffering them to sink into it: all that are here mentioned will lie fair and pleasant to the eye, and it is the fairness of the colour is most esteemed in this art of map-

painting; but if the paper be not good and strong, no art can make the colours lie well; therefore in buying maps, chuse those that are printed on the thickest or strongest paper.

DIRECTIONS how to lay on METZOTINTO
PRINTS on GLASS.

IN undertaking this, curiously lay the prints flatways in warm water, of the thinnest and finest paper, for that which is rough and thick will not do near so well, if at all; let them soak well, and your glass being very white and thin, go over it with Venice turpentine spread thin with a thin pliable knife, and daub it over with your finger, that the turpentine may seem rough.

This done, take the soaked print, and lay it on a clean cloath smooth, then press with another to take out the water, then lay it on the glass, the print next it, beginning at one end stroaking outwards the place already fixed on the glass, that neither wind nor water may be retained between to wrinkle it; then with a bit of a sponge, or your hand, wet the backside, and lightly by degrees roll off the paper carefully, without making holes, especially in the lights, which are the tenderest, and when the print appears very plain on the backside, let it dry about two hours, then varnish it over with turpentine or mastick varnish till you can see through it, and a night's drying will prepare it to be worked on with colours.

If you would have all the paper off, so that nothing but the print may remain, lay it as before with oil of mastick, and a little turpentine, and a brush will fetch off the paper.



T H E

Exports and Imports of G. Britain to and from foreign Nations.

To and from CHINA, INDIA and PERSIA.

EXPORTS. **G**reat quantities of bullion, lead, all sorts of English cloth, especially broad cloth, stuffs, callimancoes, long ells, and some other goods, which are the product or manufacture of this kingdom.

IMPORTS. China ware, tea of all sorts; cabinets, raw and wrought silks, muslins, calicoes, cotton cloths; coffee, canes, diamonds, drugs of many kinds, grocery wares of various sorts, and many other sorts of goods. Of which Mr. Gee supposes as much re-exported to foreign nations, as repays all the bullion carried to these places, and a considerable balance besides.

To and from AFRICA.

EXPORTS. Linnen and woollen manufactures, knives, scissars, small looking glasses, strong waters, pewter dishes, beads and other toys.

IMPORTS. Gold dust, red wood, elephants teeth, Guiney grain, gum, ostrich feathers, amber, ebony, crystal, and great numbers of negroes carried to the plantations of America. From the coast of Barbary we have rice, figs, almonds, raisins, dates and copper. The great advantage of the Africa trade is, that it carries no money out, supplies our plantations with negroes, and brings in a great deal of bullion for negroes sold in the Spanish West Indies.

To and from the CANARY ISLANDS.

EXPORTS. Bays, kerseys, serges, Norwich stuffs, and other common manufactures, stockings, hats, fustians, haberdashery wares, tin, hard ware, also herrings, pilchards, salted fish, grain, linnen, pipe-staves, hoops, and some other commodities

IMPORTS. Canary wines, logwood, hides, indigo, cochineal, and some few commodities which are the product of the West-Indies.

To and from TURKEY.

EXPORTS. Broad cloths, long ells, tin, lead, some iron, some French and Lisbon sugars, and some bullion.

IMPORTS. Raw silk, grogram, yarn, dying stuffs, drugs, soap, leather, cotton, oil, some fruit, as currans, raisins, vitriol, sulphur, opium, galls, balm, box-wood, mohair. The balance of this trade is thought to be in our favour.

To and from ITALY.

EXPORTS. Broad cloth, long ells, bays, druggets, callimancoes, camblets, and other stuffs, leather, tin, lead, fish, as pilchards, herrings, salmon, Newfoundland cod, ling, logwood, &c.

IMPORTS. Raw, thrown and wrought silks, wine, oil, soap, olives, some dyers wares, anchovies, brimstone, carpets, scented gloves, necklaces, and some other things. The balance of this trade is thought to be considerably against us.

To and from SPAIN.

EXPORTS. Broad cloth, druggets, callimancoes, bays, stuffs of divers kinds, leather, fish, tin, lead, linen, corn, &c.

IMPORTS. Wine, oil, fruit of divers kinds, wool, indigo, cochineal, and dying stuffs, tent, &c. The balance is supposed but very small in our favour.

To and from PORTUGAL.

EXPORTS. Broad cloth, druggets, bays, long ells, callimancoes, perpers, says, kerseys, flannels, and all sorts

of stuffs, also tin, lead, leather, fish, corn, and other things.

IMPORTS. Wine, oil, salt and fruits, as oranges, lemons, almonds, also figs, saffron, soap, white marble, liquorish, shumack. There is a considerable balance in our favour.

To and from FRANCE.

EXPORTS. Tobacco, horn plates, tin, some lead; some flannels, corn in time of scarcity, wool, coals and allum.

IMPORTS. Wine, brandy, linnen, fine lace, fine cambricks, cambrick lawns, brocades, velvets, salt, paper, prunes, chesnuts, &c. There is here a balance against us of no less than 500,000 *l.* per annum.

To and from FLANDERS.

EXPORTS. Serges, a few flannels, a very few stuffs, sugars, tobacco, tin and lead.

IMPORTS. Fine lace, fine cambrick and cambrick lawns, whited linnens, threads, tapes, incles, and divers other commodities, to a very great value. The balance is very much against us, being at least 250,000 *l.* per annum.

To and from HOLLAND.

EXPORTS. Broad cloth, druggets, long ells, stuffs of a great many sorts, leather, corn, coals, tobacco, rice, ginger, pitch, tar, with East India and Turkey goods.

IMPORTS. Great quantities of fine hollands, thread, tapes, incles, whale fins, brass battery, madder, lintseed, flax, argol, wainscot, clapboard, paper, &c. The balance is considerably for us.

To and from GERMANY.

EXPORTS. Broad cloth, druggets, long ells, stuffs, serges, tobacco, sugar, ginger, tin, lead, East India goods, and several other commodities.

IMPORTS. Prodigious quantities of linnen, linnen yarn, kidskins, tin plates, and a great many other commodities. The balance is very near as much against us in this trade, as in that of France.

Exports and Imports of Great Britain. 337

To and from DENMARK, SWEDEN, and NORWAY.

EXPORTS. Guineas, crown-pieces, bullion, some tobacco, a few coarse woollens, meal, malt, beef, tallow, salt, coal, some linnen, lead, butter and herrings.

IMPORTS. Deal boards, fir timber, spars, plank, iron and copper, wire of iron and copper, tar, wainscot, pipe staves, great guns, mortars, bullets. We pay them a very great balance, amounting to near 390,000 *l.* per annum.

To and from RUSSIA.

EXPORTS. Some coarse cloath, long ells, worsted stuffs, tin, lead, tobacco, and a few other commodities.

IMPORTS. Hemp, flax, linnen cloath, linnen yarn, Russia leather, iron, furs, pot ashes, timber, train oil, tallow, &c. to an immense value. The balance is against us here 400,000 *l.* per ann.

To and from NEW ENGLAND.

EXPORTS. All sorts of woollen manufactures, linnen, sail cloath, and cordage for rigging their ships, haberdashery, hard ware, &c.

IMPORTS. Pitch, tar, and turpentine, with some skins, pipe staves, masts, pine, cedar, &c.

To and from NEW-JERSEY, NEW-YORK and PENNSILVANIA.

EXPORTS. Broad cloath, kerseys, druggets, serges, and manufactures of all kinds.

IMPORTS. Gold and silver, with some small quantity of wheat, flax, and hemp.

To and from VIRGINIA and MARYLAND.

EXPORTS. All manner of cloathing and household goods, iron manufactures of all sorts, saddles, bridles, brass and copper wares, and in short a part of all our manufactures.

IMPORTS. Tobacco, both for home consumption and re-exportation, tar, pitch, turpentine, and some lumber.

To and from CAROLINA.

EXPORTS. The same commodities as to Virginia, z. cloaths, and all sorts of manufactures.

IMPORTS. Rice, deer skins, buck skins, beaver, and me small quantity of raw silk and tobacco.

To and from the SUGAR PLANTATIONS.

EXPORTS. Cloathing of all kinds, both linnen, silk, and woollen, wrought iron, brass, copper, all sorts of household furniture, and a great part of their food.

IMPORTS. Sugar, ginger, rum, molasses, cotton, indigo, cocoa nuts, pymento, tamarinds, lime-juice, some gold and bullion from Jamaica to the value of 539,500*l.* per ann, from Barbadoes, to the value of 146,600*l.* from the Leeward islands, viz. Antigua, St. Christopher's, Nevis, Montserrat, Barbuda, Anguilla, Spanish Town, Tortolo, and the rest of the Virgin islands, to the value of 642,270*l.*

To and from IRELAND.

EXPORTS. Beaver skins, and beaver wool, French indigo; beer, ale, and cyder; old and new drapery; salt, pitch, and tar; books, bark, bottles; silks, raw, thrown, and manufactured; cambrics, hollands, lawns, muslins; cotton, silk, and thread stockings; worsted and silk ditto, and breeches; calicoes; silk, and hair shags; silk ribbon, cottons, mohair buttons, fullians, cheques, tapes, kentings; gold and silver thread and lace; bone lace, linsley-woolseys, camblets, millenary wares; cheese, hoops, hops, chalk and whiting; lye stuffs, drugs, wrought plate, china ware, earthen ware, hard ware, tin plates, block-tin, sugars, sugar-molds, teas, groceries, fruits and spices; Turkey coffee, liquorice, logwood, cochineal, seeds, scythe-stones, tobacco, malt, wheat and flour; hats, barley, looking-glass plates, drinking and other glasses; iron, steel, sheet lead; white, red, and black ditto; flax and flax seed; cotton, and sheet ditto; mahogany, hogs bristles, colours, battery and brass shruff; goats hair, Spanish and English wool, bees wax, copper plates, Pistachio nuts, almonds, rice, Turkey figs; wool cards, spaw water, bricks, rhe-

nish wines; salt petre, mustard, red wood, cotton wool, back and doe skins; pins, needles, ermins, Turkey cotton, elephants teeth, pewter, flints, toys, hats, ivory and horn combs; hollow sword blades, coals, slates, sauff.

IMPORTS. Linnens and linnen yarn; wool, woollen and worsted yarn; copper ore, beef, butter, pork, tallow; oats and oatmeal (to North Britain) rabbits fur and skins; hides; kid, calf, goat, lamb, oter and fox skins: pelts, ox horns, glew, usquebagh, feathers, quills, candles, sope, and some other inconsiderable articles.



A N

Alphabetical List of English Manufactures, with the best Markets for the purchase of them.

BAys, double, single and minikin, are made at Colchester, Bocking, Braintree, Witham, Cogeshall, and some other towns in Essex and Manchester.

Blankets. In Oxfordshire and Wales.

Brass and copper, cast, viz. into statues, into battery, as pots, sauce pots, kettles, &c. and afterwards hammered; black latten for clock work, jacks, &c. Foundry ware, as cannon, mortars, apothecaries mortars, bells, pipes, wheel and mill work, buttons, coach and upholsterers nails: wrought or hammered, clock work, jack-work and mill-work, kitchen ware, clocks, and dials, monuments, plate brass, and toys: in and about London.

Broad cloath, mixed or medley cloaths in Wiltshire, Somersetshire, Kent, Surrey, and Devonshire. Plain white cloaths for dying, at Salisbury, Worcester, Cirencester, and all parts of Gloucestershire.

Caps, high crowned, for seamen, called Monmouth caps, at Bewdly in Worcestershire.

China, at Bow in Middlesex, and at Worcester:

Coarse woollens, as rugs, chair coverings, pennistons, half thick, duffles, &c. in Cumberland, Westmoreland, and Lancashire

Cottons, in Westmoreland, and Lancashire.

Dozens, or narrow woollen cloath mixed, at Leeds, Wakefield, Bradford and Huthersfield in the West riding of Yorkshire.

Druggets, in Wilts, Somersetshire and Berkshire.

Duroys, in the same places.

Flannels, Salisbury, Shrewsbury, and Wrexham in Wales.

Frizes, at Worcester, and parts adjacent.

Glass, fine flint, including all sorts of drinking glasses, cruets, phials, retorts, case bottles, decanters, sconces, branches, toys, watch glasses, tubes and optic glasses. at London, Bristol, Stourbridge, Nottingham, Sheffield, Newcastle.

— Looking glasses, coach glasses and fasber, at London.

— Crown glass for windows, ordinary fasbes, pictures, and ordinary quarrel glass, at London, Bristol, Stourbridge and Newcastle.

Green glass, for bottles, phials, retorts and melons, at London, Bristol, Leith, Gloucester, Stourbridge, and Newcastle.

Hats, felts at Leicester, and Warwick. Castors in Derby. Bevers in London.

Iron, cast into guns, shells, cylinders, cannon, small arms, bombs, hand granadoes, chimney backs, pots, waterpipes, furnaces, plates and bars, and retorts, at Coalbrookdale, Shropshire, and at Crowley's iron manufactories in Greenwich and Newcastle.

— Forged edge tools, knives, and scissars, cutlery ware and toys, nails, hinges, hooks, spikes, cocks, keys, razors, surgeons instruments, and clothiers and other sheers, at London, Birmingham, and Sheffield.

— Hammered, chains, anchors, crows, tires, ballustrades, rails, espaliers, palisadoes, gratings, bar iron, and screws, at London and Newcastle.

—Milled hoops and all split and flatted iron, springs for clocks and watches, London.

Kerseyes, or coarse cloaths, Bradford, Hallifax, Rochdale, Guildford, and the circumjacent country.

—Devonshire kerseyes, in Devon and Somersetshire.

Lead, Pigs and sows for exportation; sheet lead, milled or cast for covering buildings, sheathing ships, coffins, basons or fountains.

—Cast lead, for statues and pipes, bullets, small shot, moulds, letharge, calcined lead, &c. at London and Newcastle.

Linsley woolsey, for hangings, Kidderminster and Worcester.

Long ells, or perperets, at Tiverton, Sudbury and Colchester.

Manchester ware at Manchester.

Narrow woolens. See dozens.

Perperets. See long ells.

Plaidings, at Coventry and in Scotland.

Sackings, at Wantage and Newberry, Berks.

Says at Sudbury.

Serges, in Wilts, Somersetshire and Berkshire.

Shalloons, Northamptonshire, West Riding of Yorkshire, Berkshire, Somersetshire, Wiltshire, Hampshire, Carlisle, Edinburgh, Stirling and Musselburgh.

Silks of various Sorts, in Spittlefields.

Stockings, woven, Nottinghamshire, Leicestershire, Derbyshire, Warwickshire and Spittlefields.

—Knit yarn, in Gloucestershire, Yorkshire, Worcestershire, Derbyshire, Northampton, Kendal and Aberdeen.

Stuffs, Norwich, Spittlefields, Bristol and Darlington.

Tammies, or Coventry ware at Coventry.

Tapestry, at Fulham in Middlesex.

Tin, blocks for exporting, pewter molds and solder, London.

Velvets, in Spittlefields, and a sort at Manchester.

Perhaps it may not be amiss to add, that butter in firms is the produce of Suffolk, Yorkshire, Durham, Cumberland and Northumberland; cheese of Cheshire, White-

shire, Warwickshire, Gloucestershire and Suffolk; red herrings come from Yarmouth; coals from Northumberland, Durham and Bristol; malt from Herefordshire, Essex, Bucks, Kent, Oxford and Berks; salmon from Berwick.



A TABLE, shewing the Value of Portugal Pieces, in Pounds, Shillings, and Pence Sterling.

PORTUGAL PIECES.

Num. of Pieces.	at 3 12 0			at 1 16 0			at 0 18 0			at 1 7 0		
	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	3	12	0	1	16	0	0	18	0	1	7	0
2	7	4	0	3	12	0	1	16	0	2	14	0
3	10	16	0	5	8	0	2	14	0	4	1	0
4	14	8	0	7	4	0	3	12	0	5	8	0
5	18	0	0	9	0	0	4	10	0	6	15	0
6	21	12	0	10	12	0	5	8	0	8	2	0
7	25	4	0	12	16	0	6	6	0	9	9	0
8	28	16	0	14	8	0	7	4	0	10	16	0
9	32	8	0	16	4	0	8	2	0	12	3	0
10	36	0	0	18	0	0	9	0	0	13	10	0
20	72	0	0	36	0	0	18	0	0	27	0	0
30	108	0	0	54	0	0	27	0	0	40	10	0
40	144	0	0	72	0	0	36	0	0	54	0	0
50	180	0	0	90	0	0	45	0	0	67	10	0
60	216	0	0	108	0	0	54	0	0	81	0	0
70	252	0	0	126	0	0	63	0	0	94	10	0
80	288	0	0	144	0	0	72	0	0	108	0	0
90	324	0	0	162	0	0	81	0	0	121	0	0
100	360	0	0	180	0	0	90	0	0	135	0	0

Note, The bank of England nor stamp office take no pieces of gold that want above 6 grains in weight.

A TABLE, shewing the Value of Pistoles and Louis d'Ors, in pounds, shillings and pence.

Louis d'Ors, at			Pistoles at		
l.	s.	d.	l.	s.	d.
1	4	0	0	16	06
2	8	0	1	13	00
3	12	0	2	09	06
4	16	0	3	06	00
6	0	0	4	02	06
7	4	0	4	19	00
8	8	0	5	15	06
9	12	0	6	12	00
10	16	0	7	8	06
12	0	0	8	5	00
24	00	00	16	10	00
36	00	00	24	15	00
48	00	00	33	00	00
60	00	00	41	05	00
72	00	00	49	10	00
84	00	00	57	15	00
96	00	00	66	00	00
108	00	00	74	05	00
120	00	00	82	10	00

A TABLE, shewing what each of the following Pieces should weigh; likewise the Value of Gold and Silver per ounce, penny wt. &c.

Coins.	Value	Weight at 3 18.
	l. s. d.	per oz. pwt. gr.
A Portugal Piece	3 12 0	18 11 $\frac{3}{16}$
Half ditto	1 16 0	9 5 $\frac{1}{2}$
Quarter ditto	0 18 0	4 14 $\frac{3}{4}$
Eighth ditto	0 9 0	2 7 $\frac{3}{8}$
Sixteenth ditto	0 4 6	1 3 $\frac{1}{16}$
A Moidore	1 7 0	6 22 $\frac{9}{16}$
Half ditto	0 13 6	3 11
Quarter ditto	0 6 9	1 17 $\frac{1}{2}$
A Guinea	1 1 0	5 3 $\frac{1}{16}$
Half ditto	0 10 6	2 16 $\frac{1}{2}$
Louis d'Ors	1 4 0	6 6
Half ditto	0 12 0	3 3

Value of Gold.

	l.	s.	d.
1 Pound is worth	48	6	0
1 Ounce	4	0	0
1 Penny weight	0	4	0
1 Grain	0	0	2

Value of Silver.

1 Pound is worth	3	0	0
1 Ounce	0	5	0
1 Penny weight	0	0	3
1 Grain	0	0	$\frac{1}{2}$

A TABLE of the two great roads from EDINBURGH
to LONDON.

Stages	Miles			Tp Stages	Miles		
Haddington	16	16	2	Lintown	16	16	
Dunbar	13	29	2	Beild	16	32	
Old Cambus	12	41	2	Moffat	17	49	
Berwick	16	57	2	Lockerby	15	64	
Belford	16	73	2	Allifon Bank	14	78	
Alnwick	14	87	2	Carlisle	12	90	
Morpeth	19	106	2	Penrith	19	109	
Newcastle	14	120	2	Kendal	15	124	
Durham	15	135	2	Barton	12	146	
Darlington	18	153	2	Lancaster	11	157	
North-Allerton	16	169	3	Garstang	9	166	
Burrough Bridge*	19	188	2	Preston	14	180	
Weatherby	12	200	1	Wigan	16	196	
Ferry Bridge.	16	216	1	Newton	8	204	
Doncaster	15	231	2	Lestock	16	220	
Bawtry	18	239	0	Newcastle-under-L.	21	241	
Tuxford	16	255	0	Stone	8	249	
Newark	13	268	1	Litchfield	27	276	
Grantham	14	282	2	Coles Hill	11	287	
Stamford	10	302	2	Coventry	13	300	
Stilton	14	316	2	Dunchurch	9	309	
Bugdon	14	330	1	Towcester	19	328	
Biggleswade	16	346	3	Stoney Stratford	10	338	
Stevenage	14	360	2	Dunstable	19	357	
Hatfield	12	372	1	St. Albans	13	370	
Barnet	19	381	1	Barnet	9	379	
LONDON	11	392	3	LONDON	11	390	

* York is 17 miles off this place, and 9 miles about from the direct road.

N. B. Tp stands for turnpike, and the figures below what is paid at each.



Curious FIRE-WORKS.

How to make artificial fire-works of all sorts for pleasure, &c.

OF artificial fire-works for recreation, there are three general sorts, *viz.* Those that ascend or mount in the air : Those that consume on the earth : And such as burn on the water. And these are again divided into three particulars, *viz.* For the air the sky rocket, the flying saucisson, and balloon : For the earth the ground-rocket, the fiery lances, and the saucissons descendent. For the water-globes or balls, double rockets, and single-rockets ; and of these in their particular orders, to make them, and such other matters, as may occur relating to fire works.

But before I enter particularly on them, it will not be amiss to give the unlearned instructions for making his moulds for rockets, &c.

This mould must be of a substantial piece of wood well seasoned, and not subject to split or warp ; and first the caliber or bore of it, being an inch in diameter ; the mould must be six inches long, and breech an inch and half ; the broach that enters into the choaking part, three inches and a half long, and in thickness a quarter of an inch. The rowler on which you wrap the paper or paste board being three quarters of an inch diameter, and the rammer somewhat less, that it may easily pass and repass, made hollow to receive the broach ; for the cartoush coffin must be filled with the materials the broach being in.

If the bore be two inches diameter, the rocket must be twelve inches in length : if an inch and a half in bore, then nine inches long, and so proportionably to any other diameter. The cartoush or case, must be either strong

paper or fine paste-board, choaked within an inch and quarter of the top, rowled on the rowler with a thin paste to keep the doublings the nigher together, that it may have the greater force and higher flight. Having thus far considered your mould and cartouss or case, I proceed to the composition and filling part, &c.

A Sky Rocket, how to make it, &c.

In the composition of your filling materials be very cautious that you exceed not the just proportion, for which I shall give directions to be a standard in this case, *viz* Having beat a pound of powder very fine, and sifted it through a lawn-sieve, that no whole corns remain in it; do the like by two ounces of charcoal; then sift them together, so that they mix well. which done, fill a small rocket with this mixture, and if it break in mounting, before it come to the supposed height, or burns out too fierce, then is there too much powder, and more fine sifted charcoal must be added; but if there be too much charcoal in the composition, then upon trial it will not ascend, or very little.

Observe in charging your rocket, at every quarter of an ounce of ingredients, or thereabouts, you ram it down very hard, forcing your mammer with a wooden mallet, or some weighty piece of wood, but no iron or stone, for fear any sparkles of fire fly out and take your combustibile matter; so fill it by degrees. If you design either to place stars, quills, or small rockets on its head, you may put in about an inch and a half of dry powder for the bounce; but if you are to place the forementioned things on the head of a great rocket, you must close down the paper or paste-board very hard, and prick two or three holes with a bodkin, that it may give fire to them when it expires, placing a large cartouss or paste-board on the head of the rocket, into which you must put the stars or small rockets, paper serpents or quill serpents; of which I shall speak more hereafter.

Note further, That if you would have your rocket sparkle much, you must put some grossly bruised salt-petre into the composition; but then it must not lie long before it be let off, for fear it give and damp the powder. If you would have it leave a blue stream as it ascends, put fine beaten and sifted sulphur into it, but of neither

of these more than a third part of charcoal; and in this manner greater and lesser rockets are made, but the lesser must have more powder and less charcoal than the greater, by a fifth part in fix.

Golden rain, and golden hair:

For golden rain, or streams of fire, that will when at height, descend in the air like rain: take large goose-quills, take only the hollow quill as long as may be, fill with beaten powder and charcoal, as for the air-rocket only add a little powder of sulphur. Being hard filled to a quarter of an inch, stop that with wet powder, call it wild fire; place as many as you think convenient on the head of a great rocket, pasted on in a rowl of paper, that it may not fall off 'till the rocket bursts, there being a little dry powder in it to force the end when the stream of fire ceases, at which time they taking, will appear like a shower of fire of a golden colour, spreading themselves in the air, and then tending directly downwards. This is to be considered when you stand directly, or something near under them; but if you are at some distance, then they will appear to you like the blazing tail of a comet, or golden hair.

Silver stars, how to make them.

To make stars that will expand in flame, and appear like Natural stars in the firmament for a time: take half pound of salt petre, the like quantity of brimstone, finely beaten together, sifted and mingled with a quarter of a pound of gun powder so ordered: then wrap up the composition in linnen rags or fine paper, to the quantity of a walnut, bind them with small thread, and prick holes in the rag or paper with a bodkin, and place six or seven of them on the head of a great rocket, as you did the quills, and when the rocket expires, they take fire and spread into a flame, hovering in the air like stars and descend leisurely 'till the matter is spent that gives them light.

Red fiery coloured stars, how to make them.

Take in this case half a pound of powder, and double the quantity of salt petre; as much fine flour of brimstone as powder, wet them with fair water and oil of petroleum, till they will stick together like pellets; then make them up somewhat less than the former, and rowl

them in sifted dry powder, then let them harden, by drying in the sun, or air, and place them on a great rocket, as you did the other stars, and you will perceive them when the rocket is at the height, fall like bodies or globes of fire, in the manner as if real stars were shooting or falling from the sky; for by reason of their wetness or density, they cannot expand into flame, which occasions them by the pressure of their weight to descend with greater impetuosity, till they waste and vanish into air, &c.

Another sort of stars, that give great reports in the air as if armies were fighting.

Here you must observe to place six, seven, or eight small rockets on the head of a great one, filled only with dry powder, but indifferently, rammed, and on the end of them holes, being pricked through, place any of the sorts of stars, or a mixture, as your fancy leads you, and when the small rockets go off like thunder in the air the stars will take fire, so that the noise will seem to the spectators as if it proceeded from them, because they will be seen on fire before the sound of the reports can be heard.

To make paste-board mortars for balloons.

These stately prospects of fire are to be carried into the air by the force of powder, by the help of mortars; and therefore the making of the mortars are in the first place to be considered.

Take a rowler of wood, about 12 inches diameter and three foot and a half in length, wet strong paste-board, and rowl it upon it as close as may be, gluing the paste-board between each rowling; then being about five inches thick, bind over it strong pitched rope though indifferent small: then choak the breech of which must be beyond the length of the rowler, with strong cord, pitch or glue it over, that the powder may not force its vent that way, and so when the mortar well dried, draw out the rowler, and make it as even as can be; bore a touch hole two-inches from the breech that it may enter into the hollow of the mortar, and use it by for use.

To make balloons, the rarity of fire works.

Take strong paper or paste-board, rowl it on a 12 inch rowler, near as thick as 'tis long; then with a strong small cord, choke it at one end only, leaving a port fire, which is a place to put in a quill of wild-fire, that will last till (being shot out of the mortar) it comes to its height; then next to that put on an ounce and a half of loose powder, and place in it as many small rockets and stars as it will hold; so choak up the other end quite. You may also put into it little quills of wild-fire, then being closed up only a port-fire remaining, which made of a quill of wild fire, as is said, or stopple, to make which in the close of this head, I shall instruct you, charge the mortar, being set sloping upwards, with half a pound of corn powder, and it will by giving fire at the priming-holes, send the balloon up into the air a prodigious height, and when it comes to the dry powder, that will break the balloon; and then the stars and rockets in it taking fire, will scatter abroad in various curious figures, delightful to the spectators; and as they are cunningly placed, they will represent crowns, cyphers, characters, plates of the year, &c.

The airy or flying saucisson, how to make it.

This curious fire-work must be made in the composition matter for filling mostly of corned powder, putting before it when you fill the cartoush or case as much fine sifted powder and charcoal as composed for the rocket, will carry it to its height, leave a hole for the port-fire in the choaking as big as a goose quill will enter, filling it with dust powder and charcoal, and so close up the open end, by turning in the paper or paste-board corner-wise either glewing or waxing it down.

Paste-board guns to cast the saucissons into the air, how to make them.

To make these kind of guns, take a rowler, somewhat less than for the balloon, rowl it on your paste-board.

and cord it over with strong pack-thread, making their touch holes at the bottom, because they must be placed upright on a plank or board in a row fixed into plank or board in holes cut proportionable to them, and lashed fast to staples above and beneath with strong cords, and being charged with a quarter of a pound of powder, fire by match or otherwise given to the touch-hole underneath the plank, when the saucisson is lightly put in with the neck or port fire downward, so that it may touch the powder; and this will serve for use a considerable time.

Saucissons for the earth or water, how to make them.

Make your cartouches or cases about nine inches long, and an inch in the diameter of the calibre; by rowling paper of thin paste-board on a wooden rowler; choak the ends only, leaving at one end a passage to thrust in goose quills filled with dust-powder and charcoal well mixed, at a port-fire, glue them over, or use small cord glued or pitched to strengthen the case that it burst not unseasonably by the force of the composition, with which you must fill them when you have choaked; only at the port fire end, the composition being about 2 inches, the same as the former, the rest corned powder, having primed and fixed them on a plank in a row, about a foot distance, lay a train of stouple, and they will fire gradually, flying about on the earth, or the water, according as you place them, giving reports like a volley of muskets.

This stouple, is useful for trains, and port-fire is no more than cotton-wool well dressed in water and gun-powder dried in the sun, or in a clean swept warm oven, that it may come somewhat near tinder, but more swift and fiercer in its fire when it has taken.

Fire boxes how to make them.

Take a great cartouch or case made, as for the balloon, croud it full of small rockets or serpents, with the choaked part downward, prime them with stouple or wild fire; fix it firm on a pole, make a priming hole in the side towards the lower end, and run in a quill of fine beaten powder, and they will fly out (the upper end being left open) one by one as swift as may; or if you scatter loose powder, they will fly out several together

with a prodigious noise, and breaking, imitating a peal of thunder.

Fire Lances, how to make them.

These are usually for running on the water, making there a very pleasant pastime; their cartoush or cases are made like the small rocket, with thin paste-board glued and rowled up on a wooden rowler, about nine inches long: if you would have it carry a long fiery tail on the water, the composition must be 2 ounces of charcoal, half a pound of salt petre, or proportionable for so many as you make, bruised finely, and sifted; but if you would have it burn bright like a torch, put only four ounces of powder to the forenamed quantity of brimstone and salt-petre, without any charcoal-dust, tying to each line a rod in the same nature as to the sky-rocket; but not of that largeness; and they will float about a long time, making a strange shew in a dark night, their ends being so placed on a frame when you give fire, that they may leap out of themselves, one, two, or three at a time, or as you design them, by putting more or less stouple for port fires; scatter a very small quantity of loose powder underneath.

To make the appearenee of trees and fountains of fire.

This is done by placing many little rockets on the head of a great one, by passing their slender rods through its largest cartoush; and if they take fire whilst the rocket is vigorously ascending, they will spring up like branches or fiery trees; but if they go off just as the rocket is spent, and descending, they will appear like a fountain of fire.

Girondels or fire-wheels, how to make them.

Take a wheel of light wood, like the circle of a spinning wheel, on which the band is placed; tie small rockets round it in the nature of a band, so fast, that they cannot fly off; and so head to tail, that the first fired, when it bursts may give fire to the next, whole force will carry the wheel (which must be placed on a strong pin in the axletree) round so fast, that although but one rocket go off at a time, it will seem all on fire, and so continue whilst all are gradually spent; and this especi-

ally at the angles of great fireworks are very ornamental.

Ground rockets, and the best way of making serpents.

The mould of the ground-rocket may be made in all particulars like that of the sky-rocket, but less in length and circumference, six, seven or eight inches being a warrantable length; rowl on the cartoush or case to a moderate thickness; choak it at one end, fill it, the broach being as in the sky-rocket; with this composition.

Put but an ounce of charcoal to a pound of powder, and about half an ounce of salt petre, beat, mingle and sift them finely; put in about a quarter of an ounce between every ramming, till it is full within an inch with corned powder, lightly ramming it, leaving only so much room as may choak it at that end, cutting then off what hangs over, and leaving it with a pricked end; being thus finished, prime it with a little wet powder, and lay it a drying 'till you dispose of it for your pastime.

The serpent is a kind of small rocket; to make them therefore well, make a case of strong white paper, about six inches and a half, the rowler being about the thickness of a small arrow, it must have a head and a broach proportionable, being rowled up hard, paste the edge that turns over; choak it with a strong packthread, and fill it with a composition of six ounces of powder to one of charcoal, both beaten finely, sifted and well mingled; put in a little and little at a time, and every time you put any in, ram it down hard 'till within an inch full; then put in corned powder, press it down gently, and with the end of your rammer force down the end that stands a little above; so that it may cover the powder, and then seal it down with wax; prime with dust powder, and a little flower of brimstone, and with your match having a good coal on it, give fire as you see occasion.

Fiery globes or comets, how to make them.

Take half a pound of powder, two ounces of brimstone, an ounce of salt-petre, bruise these grossly, and wet them with aquavita and oil of petroleum, that they may be made into balls, as big as ordinary wath balls;

then dry them very hard, and wrap them up in cerecloths made of brimstone, rosin and turpentine, in which make a little hole, and prime with wild fire: put the ball then into a sling, and the wild-fire touched, throw it up as high as you can into the air, and when the body of the ball fires, it will appear to the beholders like a fiery globe, with a stream or blaze like as if a comet or blazing star were ascending or descending, according to its height or declination.

To try the goodness of powder, that you may know its strength.

Observe whether it be well dried and corned, which you have taken notice of, and approved; lay a few corns scattered on a sheet of white paper, and fire them; then if they leave a black and sooty mark behind them, with an offensive smell, and singe the paper, then is that powder gross and earthy, and will fail your expectation, if you use it in your fire-works; but if in the sprinkling and firing there appear few or no marks, or those of a clear blewish colour, then it is airy and light, well made, full of fire, and fit for service; half a pound of it having more strength than a pound of the other.

And thus reader, have I given you an insight into the making fire works, &c. Such as are very pleasing, and now used on occasions in all Christian countries, in making which, by a little practice, you may soon be perfect.

St George and the Dragon fighting, &c. Also
Mermaids, Whalus, &c.

Form your figures of paste-board, strengthened with wicker small sticks within pasted to the board to keep it hollow, tight and bearing out; and place a hollow trunk in the body for a large line to pass through, and likewise for a smaller to draw them to and from each other, that they may the better seem in combat, which must be fastened at the dragon's breast, and let one end of the cord be tried, which must pass through the body of St. George turning about a pulley at the other end, and fastning it to his back, and tie another at his breast, which must pass thro' the body of the Dragon, or a trunk at his back;

and so returning about a pulley at that end, it must be drawn strait, and fastened to the dragoon's tail; so that as you turn that wheel, they will run furiously at each other, and as you please, you may make retreat and meet again, soaping the line to make them slip the easier. At the Dragon's tail, in his mouth and eyes, you must fix serpents or small rockets, which being fired at their setting out, will cause a dreadful sight in a dark night.

Thus a mermaid or a whale may be made to float on the water; but then the figure must be fixed on a convenient piece of board, with two fire wheels fixed on an axle, run through the poised part of the body, by the force of which it moves in a swift line in the water; the wheels must have little rockets or serpents tied round them, as the girondel before-mentioned.

A Fire-Drake on a line.

Having made the figure of a paste-board to the proper form of a dragon, with pasteboard and wicker, as has been taught before, make a hollow trunk through the body of it for a great line to pass through, and fasten small lines to draw it to and from you, at the breast and tail of the drake; put into the eyes, mouth, and tail of it rockets so fixed, that they cannot fly out, as you may put wild fire rowled up hard and long in paper: then fire that in the eyes and mouth first, and draw it with pullies from one end of the line to the other, then that at the tail, and draw it back, and it will seem retreating from danger, with fire coming out of the belly of it.

A burning Castle and a Dragon on the Water.

Make the dragon of paste-board and wicker, as before, the bottom of the castle of light wood, and the work of paste board with paper, turrets, and battlements of a foot height, in the portal of the castle fasten a line, that it may come level with the water, and therefore some part of the castle must be under water: this line must be fastened to the other side of the water, or in the water, if it be broad, and admit not of the former on a pole or stake knocked down, and pass in a hollow trunk through the belly of a dragon, that being in the castle, may upon

bring the rockets, placed advantageously in the tail, eyes and mouth, come out of the castle, and move on the line: to meet which, you may at the other end of the line, in the same manner, prepare a Neptune in a chariot or riding on a seahorse with a burning trident, or whale with a rocket or wild-fire in his mouth; then by a train fire some little paste-board guns in the castle, which if the composition of the train be made of wild-fire or stouple, will go off by degrees, and coming to a train of brimstone, rosin and powder, make the whole frame expire in a terrible blaze.

A wheel of fire works to run backwards and forwards on the ground.

Procure a pair of wheels, being of light wood, like that of a spinning wheel, fasten them on an axle-tree, and place rockets round them, as bands are fastened round a wheel, and so primed at tail and head, that when one expires, the other may take fire, half of them placed with their heads and tails the contrary way to the first: so that when the first are spent and the wheel have run on plain ground, a great way, the other firing, will turn them again, and bring them to the place where they first set out.

A fire that will burn in the water, or water-ball.

Sow up a case of canvass like that of a foot-ball but lesser, pitch or glue it over; then take one pound of powder, eight ounces of roch alom, four ounces of life sulphur, two ounces of camphire; lintseed oil, and that of petroleum, each an ounce and half; an ounce of oil of spike, with two ounces of colophonium bruised, and well mixed together, and stuff the ball hard with it, with a stick, pitch or glue it over again, binding it with marline or pitch, on that leave two vents or port fires, set it on fire, trundle it on the water, and it will burn under it.

English Spelling Dictionary.

A B R

A Bandon
 abase
 abasement
 Abashment
 abate
 abatement
 abbacy
 abbess
 abbot
 abbreviate
 abbreviation
 abbutals
 abdicare
 abdication
 abdomen
 abet
 abettor
 abhor
 abhorrence
 abject
 abjection
 ability
 abduration
 able
 abnegation
 aboard
 abolishment
 abominable
 abomination
 abortion
 abound
 abrenunciation

A C C

abridgment
 abroad
 abrupt
 abscess
 abscond
 absence
 absolve
 absolute
 abstemiousness
 abstract
 abstraction
 abstruse
 absurd
 abundance
 abuse
 academy
 acceleration
 accept
 acceptableness
 accessory
 accident
 accidentalness
 acclamation
 accommodate
 accommodation
 accompaniment
 accompany
 accomplice
 accomplish
 accomplishment
 accord
 account

A D M

accountant
 accoutrement
 accumulation
 accuracy
 accursed
 accusation
 accuser
 acid
 acknowledgment
 acquisition
 action
 actor
 acute
 adapt
 adder
 addition
 address
 adequateness
 adhere
 adjacent
 adieu
 adjoin
 adjournment
 adjure
 admeasurement
 administer
 administration
 administratorship
 admirableness
 admiralty
 admire
 admit

A G I

A N A

A Z U

admonish	agility	ancestors
adopt	agitate	anchovy
adorable	agonize	animadversion
adornment	agreeableness	animalcule
advancement	agreement	anniversary
advantageous	agriculture	annoy
adventitious	agrimony	antichamber
adventure	aground	antimonarchical
adventurous	alabaster	antichristianism
adversary	albeit	antipodes
advertisement	alchymist	apocrypha
advice	alderman	apoplectic
adult	alegar	apparatus
adulteration	algebra	apparition
advocate	alien	applicable
advowson	aliment	archdeacon
affability	allegiance	archbishop
affair	allegorical	archetype
affectation	alleviate	argumentation
affection	alligation	armada
affectionate	alligator	arraignment
affectionateness	allowance	arrogance
affective	almanack	arrogate
affiance	Almighty	arsenal
affidavit	aloes	asparagus
affinity	alphabetically	aspiration
affirm	already	associate
affirmatively	alteration	assuage
affix	alternate	astonish
affluence	amain	astriction
afford	amass	astrologer
affranchise	amercement	astronomy
affray	amicableness	atrocious
affront	amusement	attribute
affusion	anabaptist	avail
aforehand	anagrammatist	avarice
aggrandize	analogy	auctioneer
aggravate	analysis	authority
aggravation	anarchy	axel tree
aggression	anathema	azure
agile	anatomy	

B A R

B E A

B E V

B	B	B
Batchelor	Barneſley	beauty
backſide	Barnet	beaux
backward	Barnſtaple	Beckernet
backwardneſs	barometer	Beckingham
bagnip	barrack	Beckles
bag pipe	barricado	becomingneſs
bailli	barrier	bedaggle
bailiwick	barriſter	Bedall
balance	Barſtead	bedaub
balcony	barter	Bedford
balderdaſh	Barton	Bediford
baldneſs	baſe	Bedlam
bale	baſhful	beech
baleful	baſil	Beelzebub
ballad	baſilisk	beefom
ballaſt	Baſingſtoke	beggary
balluſtrade	Baſſa	belabour
Bamburg	Baſſaley	beldam
Bampton	baſſet	beleaguer
Banbury	baſſoon	Belford
banditti	baſſrelief	belfery
bandolier	baſtile	Belgian
bane-berry	baſtinado	Belgie
baneful	baſtion	bellow
Bangor	baſtwick	belfwagger
banker	baſtoon	Beltingham
bankrupt	battalia	belvidere
Banſtead	Bautre	Belvoir-caſtle
Barbadien	bawdry	bemire
Barbadoes	Bayborough	Bemiſter
barbarian	baynard	berganiot
Barbary	Beachley	Berlin
barbed	beacon	beſpeckle
barbel	Beaconsfield	beſprinkle
barbles	beadle	beſtridden
barber	beadſman	Bethkeleſt
Barbican	beard	bethought
Barmore	beaſt	Betley
Barnote	beatific	betony
Barnby	beau	betroth
	beaver	bevel

B L E

B O S

B U C

beverage
 Beverley
 Bewdloy
 bewildered
 bewitch
 Bewmauris
 Bicefter
 bidder
 bigotism
 bilander
 bilboes
 Bilderston
 bilious
 Billericay
 billet-doux
 Billington
 Billingham
 binder
 Bingham
 biographer
 bird-call
 Bird-lime
 Birmingham
 bishoprick
 biss textile
 bittern
 bitumen
 blabber
 Blackburn
 blackmoor
 blackness
 blacksmith
 bladder
 Blaize
 blameable
 Blandford
 blanket
 blaspheme
 blazon
 bleak
 bleat

Blendor-hasslet
 blindfold
 blinkard
 Blithe
 blockade
 blockhead
 bloodshed
 bloodshot
 blossom
 blowze
 blunder
 bluntness
 boaster
 boatswain
 bobtail
 bodice
 boggle
 boggy
 boiler
 boisterous
 boldness
 bolster
 Boston
 bombardier
 bombast
 bombazine
 bondage
 bonfire
 bongrace
 bonnet
 booby
 book-binder
 book-keeping
 bookseller
 book-worm
 boorish
 bopeep
 bondage
 borrower
 bosage
 Bosphorus

bosses
 Boston
 botanical
 botcher
 botchingly
 bought
 bolting-mill
 bounce
 boundary
 bounteousness
 bowelled
 bowling-green
 Bowtel
 boyish
 braggadocio
 brainless
 brand-iron
 brandish
 brandling
 brandy
 Brasil
 bravado
 brawler
 brawn
 brawniness
 breast-plate
 breeches
 breeding
 Brentford
 breviary
 brew-house
 Brickhill
 bride-groom
 Bridewell
 brigade
 brigandine
 brigantine
 Brokenhurst
 browantler
 brow-beaten
 bucksomeness

B U L

buckthorn
 buckweed
 Bucolics
 bud
 Buddefdale
 buddle
 budge
 budget
 Budworth
 buff
 buff-coat
 buffle
 buffoonery
 bug
 Bugdon
 buggerer
 buggery
 bugle
 bugle-horn
 bugloss
 build
 builder
 building
 built
 bulb
 bulhacency
 bulbine
 bulbous
 bulfinch
 bulge
 bulk
 bulkiness
 bulky
 bull
 bullace
 bull-baiting
 bull-beggar
 bullet
 bull-herd
 Bullingbrook
 bullion

B U R

bullock
 bully rock
 bul-rush
 bulwark
 bum
 bumble
 bump
 bumpkin
 bunch
 bunchiness
 bunchy
 bun
 bundle
 bundle-wife
 Bungaye
 bung-hole
 bungle
 bungler
 bunglingly
 bunt
 bunter
 bunting
 Buntingford
 buoy
 buoyant
 buoing
 bur
 Burbich
 burden
 burdensome
 burdensomeness
 bureau
 Burford
 burges
 burgeship
 burgh
 Burghdere
 burgher
 burglar
 burglary
 burgmote

B U T

burgomaster
 burial
 burlesk
 burling-iron
 burley
 burn
 burnet
 Burnham
 burning
 burning-glass
 burning-iron
 burnish
 burnisher
 Burnley
 burnt
 Burntwood
 burr
 burrel
 burrow
 Burrowbridge
 burse
 burser
 burst
 bursten
 burstenness
 Burton
 Burtonferry
 burt-wort
 bury
 bush
 bushel
 bushy
 busily
 business
 buskin
 bus
 bust
 bustard
 bustle
 busy
 but

C A M

C A R

C A S

butcher
 butcherly
 butchers-broom
 butchery
 butler
 butlerage
 butlership
 butt
 butter
 butterfly
 butter-milk
 butter-teeth
 buttery
 buttock
 button
 buttress
 Buxton
 buy
 buyer
 buz
 buzzard
 by
 By-berry
 by-ends
 By-ford
 by lander
 by lands
 by-laws
 by-place
 by-way
 by-word

C

Calvinist
 calumniate
 canbric
 Cambridge
 ameleon
 Camelford
 canlet
 canomile
 campaign

Campden
 camphire
 champion
 Canary-bird
 cancer
 candidate
 candid
 Candlemas
 candlestick
 candour
 Canibal
 canine
 canker
 Cannalton
 cannon
 canonical
 canoist
 canonization
 canonship
 canopy
 Canterbury
 cantharides
 Canticles
 cantonize
 canvass
 capacious
 capapee
 caper
 capillary
 capital
 Capitol
 capitulate
 capon
 caprice
 captain
 captious
 captive
 capture
 capuchine
 carabineer
 caravan

carbonade
 carbuncle
 carcass
 cardamum
 Cardigan
 cardinal
 career
 careful
 careless
 Carew
 cargo
 carlings
 Carlisle
 Carlton
 Carmarthen
 Carmelite
 carmine
 carnal
 Carnarvon
 carnation
 carnival
 carnivorous
 Carolina
 carouse
 carpet
 carpenter
 career
 carriage
 carrier
 carrion
 cartel
 Cartesian
 Carthusian
 cartilage
 Cartmel
 cartridge
 cascade
 cashier
 Cassiope
 cassock
 castaway

H h

C E L

Castle comb
 Castle-rising
 castling
 castrate
 casual
 casually
 casuist
 catacomb
 catalogue
 catarrh
 cataplasm
 cataract
 catastrophe
 catchpole
 catechetical
 categorical
 caterer
 caterpillar
 cathartic
 Catharine
 cathedral
 catholick
 Cats-ash
 Caterick
 caterwawling
 cavalcade
 cavalier
 cavalry
 Caucler
 caveate
 caveer
 cavern
 cayernous
 cauldron
 caustic
 caution
 cautiously
 Caxton
 Caxwold
 celebrate
 celerity

C H A

cellarage
 cement
 censor
 centaur
 centinel
 century
 cephalic
 Cerberus
 cere-cloth
 ceremonial
 certainty
 certificate
 cessation
 chaffing-dish
 chaife
 chalcedony
 Chaldee
 chaldron
 challenge
 chamber
 chambering
 chamberlain
 chambermaid
 champaign
 champion
 chancellor
 chance-medley
 chancery
 chandler
 change
 channel
 chapelry
 chaplain
 chapman
 chaplet
 Chapelborn
 character
 charcoal
 chargeable
 Charing
 chariot

C H I

charitable
 charmer
 charnel-house
 chart
 chartel
 charter
 chaste
 chasten
 Chatham
 chattles
 chatter-pye
 cheap
 chequer'd
 cheek bone
 cheer
 cheese
 Chelford
 Chellingford
 Chelmsford
 Cheltenham
 Chepstow
 cherish
 Cherloury
 cherry-stone
 cherubim
 Chesham
 Cheshunt
 Chetelhampton
 chevalier
 Chewton-Mend
 Chicheste
 chicken
 Chidingford
 chidingly
 chief
 chiestain
 chilblain
 child-bearing
 Childermas
 Childham
 chimerical

C I R

C L I

C O M

chimney piece
China
Chipcase
Chippenharn
Chipping-Norton
Chipping-Ongar
Chirk-castle
chirographer
chirurgeon
chitterling
chocolate
choice
choler
Cholmondely
chorographer
Christ
Christ-cross-row
Christendorn
Christmas
Christ's Church
chronologer
chubbiness
Chudleigh
Church-Stretton
church-warden
churlish
chymical
chymist
chymistry
Ciceronian
circumference
circumflex
circumfusion
circumjacent
circumlocution
circumposition
circumscription
circumrotation
circumspection
circumstantial
circumvallation

circumvent
circumvolution
Cirencester
cistern
citadel
citation
cite
citron
civet
civil
civilian
clack
clad
claim
clam
clandestine
clap
Clapham
Clare
claret
clarification
clarion
clash
clasp
clatter
clave
clause
clay
clean
clear
clef
clemency
Clement
clenchers
clergymen
Clevedon
claw
Cleydon
click
Cliffe-kings
climacterical

cling
chipper
clock-mark
clod-head
clog
cloister
Clophill
close
clothier
cloudiness
cloven
clownishness
club-footed
clump
clunch
cluster
clutter
Clyncorug
coacervate
coach
coadjutor
Cobham
cockatrice
Cockermouth
coddle
co-efficient
coffeehouse
Cogeshall
cognate
co-heir
co-herence
cohabitation
coition
colander
Colchester
collarage
collection
collision
colloquy
columbine
combat

C O N

C R U

C Z A

comber	controversy	crumb
Comberton	contumely	crystal
combination	convent	cub
Combmerston	convulsion	cuckold
comedian	cook	cudgel
comfortable	copious	culmer
comical	coquet	culpable
comeliness	Corbridge	cultivation
commandment	cordial	cumbersome
commemoration	corner	cunning
commencement	coronation	cupboard
commensuration	corpulence	cur
commedioufness	corruption	curable
comparative	cosmography	curate
complaint	cottage	curb
complexion	cover	curdle
complement	counsellor	curiosity
comportment	courtship	curlew
comprehension	coward	currans
compression	coxcomb	curry
concealment	coy	curse
concise	cozen	curtain
conclusion	crab	curvet
concoction	crack	custody
concubine	cradle	custom
condemnation	craft	cut
confabulation	crag	cuz
confection	craggy	cycle
confirmation	crambo	cycloid
conformable	crane	Cyclops
congenial	crape	cygnet
conjecture	cravat	cylinder
conjunction	crawl	cymbal
connexion	crayon	cynic
conquer	crew	cynical
conscience	crimson	cyon
consignation	crocus	cyphon
consubstantial	crookedness	cypress
consumption	crowd	czar
contemplation	Croyden	czarefs
contradiction	crucifix	czarina

D E C

D E R

D I S

D

Dagon
 daunties
 Dalmatia
 Dalmatick
 Dalton and Castle
 damageable
 damnable
 dampishness
 Danby
 dandelion
 Danc-gelt
 dangerous
 Darby
 Darisbury
 Darlington
 Dartford
 Dartmouth
 Daventry
 St. Davids
 daughter
 dauntlessness
 Dauphin
 dazzlingness
 deaconship
 Deal
 deambulation
 deanship
 death-watch
 debauchee
 debenture
 debonairness
 Debrough
 Decameron
 decampment
 deceitfulness
 deceiver
 December
 decemvirate
 deception
 decimation

decipher
 deceiver
 declaimer
 declaratively
 decoction
 decorate
 decorum
 decrepid
 Deddington
 dedicate
 dedication
 deducible
 defamation
 definition
 deformation
 degenerateness
 dejection
 delegate
 deliberation
 delicacy
 deliciousness
 delightful
 delineate
 delineation
 delinquent
 delirious
 deliverer
 demi-god
 democracy
 Denton and Hall
 denunciation
 Denzil
 Dependable
 dependance
 deplorable
 deposition
 depravation
 deprivative
 deputation
 Dereham
 derivation

derogate
 description
 designation
 desolation
 desperado
 despicable
 despise
 spiteful
 despond
 despotic
 detect
 determine
 detestable
 dethrone
 detracter
 diabetes
 diabolical
 diagnostic
 dialling
 dialogue
 diamond
 diametrical
 dictator
 dictionary
 Didmerton
 Dieping Market
 difficult
 diffuse
 Digby
 digestion
 dilemma
 diligence
 dilucidate
 dimension
 diminution
 diocesan
 diploma
 direction
 disadvantage
 disagreeable
 disappoint

D I S

disband
disburden
discipline
discomfiture
discommode
discompose
disconsolate
discontent
discontinue
discountenance
discredit
discreet
discriminate
disdain
disencumber
disfranchise
disgraceful
dishonestly
disingenuous
dislocate
disloyal
dismember
disobedient
disoblige
disparage
dispatch
dispenser
displeasure
dispossess
disprove
dispute
disquiet
disrepute
disrespectful
dissatisfactory
dissemble
dissent
dissimulation
dissolvable
dissolute
disswade

D O R

distasteful
distemper
distiller
distinction
Distinguish
distinguish
distract
distress
distributor
distrustful
disturbance
dittander
diversifie
divertisement
dividend
divination
divinity
divorcement
divulge
D-la-sol-re
docibility
Doking
Dokley
doctorship
document
Dodbrook
doggedness
Dolbenmen
dolefully
Dolgad-Van
Dolgelle
dolphin
domestic
domineer
dominical
donation
Doncaster
Dorchester
dormitory
Dorp
Dorset

D U S

doteril
doubtful
Dove and Castle
doughtiness
Dousable
Downham
downward
doxology
drapery
drawback
draw-bridge
dreadful
dreamer
dredging box
dripping pan
driveller
Droitwich
drollery
dromedary
dropical
drudgery
druggist
Druids
Drumborough
drum major
Druston Castle
dubiousness
Dublin
ducatoon
dudgeon
dukedom
dulcimer
Dulverton
dumbness
Dunchurch
Duncton
dunghill
Dunnow
Dunnington
Dunstable
duskiness

E B O

E L A

E M B

duskyish
dusky
dust
duster
dustiness
dusty
Dutch
duteous
dutiful
dutifully
dutifulness
duty
duumvirate
dwale
dwarf
dwarfish
dwell
dweller
dwelling
dwindle
dyer
dyers-weed
Dynas-Mouth
dynasty
dyeracy
dysentery
dysury
E
Earl
earnest
ear-ring
earth
earth-quake
ear-wig
ealiness
East-Ham
Eaton
Eaton
eaves-dropper
Ebionites
ebody

ebullition
eccentric
Eccles
ecclesiastic
echo
eclipse
ecliptic
eclogue
ecstasy
edacity
eddy
Eden
edict
edification
edifice
edition
education
efface
effectual
effeminate
efficacious
efficient
effigies
efflation
effluvia
efflux
effort
effrontry
effulgence
effusion
egection
Eglestonbridge
egregious
Egremont
Egypt
Egyptian
ejaculation
ejection
Ela
elaborate
E-la-my

Eland
elapse
elasticity
elder
election
elector
elegance
elegy
elemental
elephant
elevate
eleven
Elham
Elhill
eligible
elixir
Ellesdon
Ellesmere
ellipsis
elogy
elope
eloquence
eloquent
Elstre
Eltham
elucidate
elucubration
elusion
Elysian
Elzivir
emaciate
emasculate
embale
embalm
embargo
embark
embarrass
embassy
embattle
embellish
embezzle

E N F

emblem
 emboss
 embowed
 embowel
 embrace
 embrocation
 embroider
 embroil
 embryo
 emeralds
 eminent
 Emley
 emolument
 emotion
 empannel
 emperor
 emphasis
 empire
 employ
 empress
 emulate
 emulgent
 emulsion
 enamel
 encamp
 enchant
 enchiridion
 enclosure
 encourage
 encroach
 encumber
 endear
 endive
 endow
 endure
 enemy
 energy
 enervate
 enfeeble
 Enfield
 enfranchise

E P A

engage
 engine
 engrave
 England
 engross
 enhance
 enigma
 enjoy
 enlarge
 enlighten
 enmity
 ennoble
 enormity
 enrage
 enrich
 enrol
 ensample
 enshrine
 ensign
 entablature
 entail
 entangle
 entendre
 entercourse
 enterprize
 entertain
 enthrall
 enthrone
 enthusiasm
 entice
 entity
 entrails
 entrap
 entreat
 enucleate
 envious
 environ
 enumerate
 enunciation
 envoy
 epact

E S T

ephemeria
 Ephialtes
 ephod
 epicure
 epicurean
 epidemical
 epigram
 epileptic
 epilogue
 episcopacy
 episode
 epistle
 epithet
 epitome
 epitomize
 Epping
 Epsom
 Epworth
 equal
 equator
 equilateral
 equinox
 equip
 equity
 equivocal
 eradication
 Ercol and Castle
 erector
 eremitical
 erratic
 error
 escheat
 eschew
 escorial
 escutcheon
 espousals
 esquire
 Essenes
 establish
 estimate
 Estri-Divodoti

E X P

E Z R

F A T

F

eternal
Ethiopian
etymological
evacuate
evangelical
eucharist
event
eventilate
evermore
evershalt
Evesham
evitable
Eunomians
Euphrates
Europe
evulsion
Ewell
exact
exchequer
exclaim
exclude
execute
exemplary
Exeter
Exmouth
Exodus
exonerate
exorbitant
exorcise
expand
expatiate
expectation
expedient
expedition
expel
expensive
experiment
expertly
expiration
expire
explain

explanation
explication
explicit
explode
expound
express
expulsion
expunge
extend
extent
exterminate
external
extinguish
extirpate
extol
extort
extract
extraordinary
extravagant
extreamly
extricate
extrude
extrusion
extuberance
exuberance
exuberant
exuberantly
exulcerate
exulceration
exult
exultation
exuperable
eye
eye bright
eye-brow
eye-sight
eye-sore
eye-teeth
Eyton
Ezekiel
Ezra

Fabulous
facetious
facilitate
facility
faction
factor
faint heartedness
Fairford
Fairleigh
fairy
faithful
falcon
fallacious
fallible
Falmouth
falsifier
familiar
familist
famine
famous
famously
fanatical
fantastic
fantastical
fantom
fardingale
Farnham
farinaceous
farmable
Farnborough
Farnham
farrier
Fardingdon
farthing
fascinate
fashionable
fastidious
fastness
fasting
fatally

F I C

F L A

F L O

fatherless
 fatigue
 faulchion
 favourable
 fawningly
 fearfully
 February
 Feckingham
 feculent
 fecundity
 federal
 feebleness
 fecilitate
 fell monger
 fellowship
 felonious
 Felton
 female
 feminine
 fessment
 fermentation
 Fermingham
 ferocity
 Ferrybridge
 Ferryhill
 fervent
 fervency
 fertile
 fervently
 festival
 fetlock
 feudal
 feverish
 Feverham
 fewel
 F-fa-ut
 fibber
 fiber
 fibrous
 fickleness
 fictitious

fictitiousness
 fiddle
 fidelity
 fierceness
 firmness
 fifteenth
 figary
 pigment
 figurative
 filament
 flanders
 Filey
 filiation
 filigrane
 fillip
 filter
 filthiness
 filtrate
 filtration
 finable
 finance
 find
 fineness
 finger's-breadth
 finical
 finisher
 finiteness
 firmament
 firmly
 first
 firstling
 fiscal
 fisher man
 Fishgard
 fistula
 fixedness
 fiz gig
 flabbiness
 flaccidness
 flagelet
 flaggings

flagitious
 fragrancy
 flagrant
 flagrantness
 flambeau
 flammiferous
 flaconade
 Flanders
 flanker
 flashiness
 flatness
 flatterer
 flatulent
 flauntingness
 flaxen
 fleetness
 flegmatic
 Flemish
 fleshiness
 fleshliness
 flexanimous
 flexibility
 flexibleness
 flimsiness
 flimsy
 finchers
 flippant
 flippantness
 flittermouse
 flix-weed
 flitage
 Flora
 Florence
 florentine
 florid
 floridness
 flounce
 flounder
 flourish
 flouter
 flower-de-luce

F O R

F U L

G A R

fluctuate
 fluctuation
 fluellin
 fluently
 fluidity
 flummery
 fluster'd
 fluxibility
 focillation
 fodder
 foggishness
 foible
 Fokingham
 foldage
 foilage
 follower
 fomentation
 fondling
 fontanel
 fool-hardiness
 fool-hardy
 foolishness
 footman
 foppery
 foppishness
 forbearance
 forbidden
 forceps
 forcible
 forage
 Fordingbridge
 fore-appoint
 fore-arm'd
 fore-cast
 fore-close
 fore-deem
 fore-door
 fore-fathers
 fore-finger
 fore-front
 foreigner

fore-judge
 fore-know
 fore-knowledge
 fore-noon
 fore-ordain
 fore-runner
 fore-speak
 fore-teeth
 fore-thought
 forgetful
 formality
 fornication
 forsake
 forth-coming
 fortitude
 fortunate
 forward
 Foston
 Foulkton
 foulness
 foundation
 foundling
 Four-Crosses
 fourteenthly
 Fowey or Foy
 fowling piece
 Fowr-hope
 fractiousness
 fragrant
 fragrantness
 frailty
 France
 fraternity
 freehold
 friendship
 frolicksome-ness
 fructification
 frugality
 frying pan
 furiousness
 futurity

G
 Gaddingly
 gaggle
 gainfully
 Gainsborough
 gain-stand
 galbanum
 Galenical
 galeons
 gallantry
 gallery
 galley
 galleo-foist
 galley pot
 Gallican
 gallicism
 gallion
 gallop
 galloway
 galoon
 gambol
 gamesom
 gamelter
 gammot
 gamut
 gang
 Ganges
 Ganymede
 garbler
 garbles
 gardener
 gargarism
 gargarize
 garland
 garment
 garnish
 garnisher
 garnitur
 garretteer
 garrison
 garrulous

G E O

G L O

G R A

Garstang
 Garthley
 Gascoigne
 gastliness
 Gates-Head
 Gatton
 gaudiness
 gaudy
 gavel-kind
 gavelock
 Gayton
 gaze-hound
 gazette
 gazetteer
 geese
 geldable
 gelding
 geminate
 gemination
 geminary
 gemmow
 genealogical
 generalissimo
 generality
 generation
 generosity
 generousness
 Genesis
 Geneva
 genial
 genticulate
 gennet
 genteel
 gentian
 gentilism
 gentleman
 gentlewoman
 gentry
 genuineness
 geographer
 geography

geomancy
 geometrician
 Georgics
 geoscopy
 St. Germain
 germination
 gerundive
 gestation
 gesticulation
 Gateabridge
 gew-gaws
 ghostliness
 ghostly
 giant
 gibble-gabble
 gibbous
 giddiness
 Giggleswick
 gigglet
 gilder
 gilliflowr
 ginger bread
 gingler
 girl
 girt
 Gisbon
 Gisborough
 gizzard
 gladiator
 gladness
 Glamfor
 glanders
 Glassenbury
 glazier
 gleam
 glebe
 Glew-great
 glitteringness
 globular
 Gloucester
 gloominess

glorification
 gloriousness
 glossographer
 glow-worm
 glutinous
 Gnatho
 gnomonics
 Gnostics
 goaler
 goatish
 goatishness
 gobblet
 Godalmin
 Godfather
 Godmother
 Gofford
 Gofforth
 goggle ey'd
 goldilocks
 Golgotha
 Gomer
 gondolier
 gonorrhœa
 gooseberry
 gorgeous
 gormandizer
 gormandize
 gospeller
 gossipings
 Gothic
 Goths
 St. Goven
 governableness
 governess
 government
 governor
 gracefulness
 graciously
 gradual
 Grafton
 Graies-Thurruce

G E R

G Y M

H A R

grammarian

Grampound

grampus

granadier

granado

granary

grandame

grandee

grandeur

grandfather

grandmother

grandfire

grannum

grant

grantee

Grantham

granter

granulation

graphically

grals

grashopper

gras-plat

grassy

gratefulness

gratification

gratings

gratitude

gratulatory

graveness

Gravesend

grayhound

grazier

greasiness

greatness

Grecian

Grecism

Greece

green

green-house

greenness

Greenwich

Gregorian

grew

grievousness

grimness

Grinsted

Grismond

grissel

grittiness

grizliness

groan

grocery

grogram

groom porter

groop

groove

gross

grotesk

grotto

grovelling

ground ivy

ground

grout-head

growl

grubbage

gruel

gruffness

grumble

Grynton

guarantee

guardian

gudgeon

Guild-hall

Guilford

guiltless

guinea

gun

gun-powder

gush

gutter

Guy

gymnastics

gymnosophist

gyration

gyron

H

Habitation

hab nab

Hackney

haddock

Hadley

Hadenbridge

Hadshe

haggard

Haggerston

Hague

hainous

halbart

halcyon

Hales Owen

Halesworth

half-moon

Halifax

halliards

halloo

hallow

Haltfield

hamlet

hammer

hamper

Hampton

ham string

handkerchief

handmaid

handsomeness

handy

hanger on

Hanly

Hanmere

hans-en-kelder

happiness

harangue

harass

H E A

H E R

H O L

harbinger	heathenism	herring
Harborough	heavenly	Hertford
Harbottle-Castle	heaviness	he tate
hardy	Hebraism	hesitation
Hardwicke	hecatomb	heterodox
hair brain'd	hectic	heterogeneal
Haringworth	heedful	hexagon
harrowable	heifer	hexameter
Harleigh	heir-loom	Hexham
harlequin	Helford	hickup
harlotry	helical	hidebound
harmful	hellebore	hideousness
harmlessly	Hellenist	hierarchy
harmonious	Hellespont	hieroglyphic
harness	hell-hound	Highgate
harpooneers	hellishness	High worth
harpichord	helm	highness
harshness	helpful	Hilary
Hartlepool	helpfulness	Hilborough
hartshorn	Hellon	Hindon
harvest	helter-skelter	Hingham
Harwich	hemicycle	Hinxley
hassock	hemlock	hippocras
hastiness	Hempsted	hissing
Hastingsden	henceforth	historian
hateful	hea-hearted	historiographer
Hatfield	herbalist	hitherto
Haverford	Herculean	Hittites
haughtiness	hereditament	Hivites
havoc	hereditary	hoarseness
hautboy	Hereford	hobgoblin
Hawkshead	heretically	hodge podge
hawser	heretage	hoggishness
hazardous	Herling	hog-grubber
headborough	hermaphrodite	hoghead
Headon	heremetical	Holbeach
healthful	hermodactyl	holioak
hearkener	herenshaw	holiness
heart-burning	Herodians	Holland
heartiness	heroical	hollowness
heath-cock	heroine	Holy well

H U C

H Y P

J E W

homage	hug	hysteric
home	hugely	hysterical
homeliness	hugger-mugger	hystericalness
Homer	Hugonut	I
home-spun	humanist	Jacobite
homicide	humanize	jagged
homily	humanly	jail-bird
homogeneous	humbleness	Jamaica
homologous	humid	lambic
honestness	humidity	jangle
honey comb	humiliation	Janizary
honey-moon	humorist	jannock
honorary	Hunanby	Jansanism
honourable	hunch-back'd	January
hook	Hungary	Japan
hooked	hungrily	japanner
hopeful	hunks	jar
hopper-ars'd	hurlers	jargon
hops	hurry	javelin
Horeb	hurt	jaundice
hore-hound	hurtful	ichnography
horizon	husband	ichnographical
horizontally	Hussars	ideal
Hornet	Hustings	identical
horological	hut	idiom
horoscope	hutch	idiomatically
horridness	huzza	idleness
horse-leech	hydra	idolater
horsemanship	hydraulics	jealous
horse-raddish	hydrographer	jeerer
Hosanna	hydromel	Jeffrey
hospitable	hydrometer	Jehovah
host	hydropical	jeune
hostile	hymn	jennet
hostileness	hyperbole	jeopardy
hot-cockles	hyperbolic	jerkin
hotness	hypochondriac	jeffamin
torch-potch	hypocrisy	jester
household	hypocrite	Jesuit
bubble-bubble	hypostatic	Jesus
cluster	hypothetical	jeweller

I M M

ignoble
 ingnomious
 ignoramus
 ignorance
 ignoscible
 illegal
 illegitimate
 illicit
 illiterate
 ill-natured
 illogical
 illuminate
 illusion
 illustrate
 Ilminster
 imagery
 imaginary
 imagination
 imblam
 imbargo
 imbarkation
 imbattle
 imbellishment
 imbezzel
 imbibe
 imbitter
 imbolden
 imbosom
 imbrication
 imbroider
 imbroid
 imbrue
 imitable
 imitative
 imitator
 immaculate
 immanent
 immaterial
 immature
 immediate
 immemorial

I M P

immense
 immerger
 immerse
 immethodical
 imminent
 immoderate
 immodest
 immoral
 immoveable
 immunity
 immutable
 impale
 impanel
 imparlance
 impartial
 impassable
 impatience
 impeach
 impede
 impenetrable
 impenitence
 imperative
 imperfect
 imperial
 imperious
 impertinence
 impetuous
 impious
 implacable
 implead
 implicit
 implore
 employment
 impolite
 imporous
 importation
 importune
 imposition
 impossible
 imposture
 impotence

I N C

impoverish
 impracticable
 imprecate
 impregnate
 impress
 impression
 imprimis
 imprint
 imprison
 improbable
 improper
 impropiator
 improvable
 improvement
 imprudence
 imprudent
 impugn
 impunity
 imputation
 inaction
 inactivity
 inadvertency
 inalienable
 inamorato
 inanimate
 inarticulate
 inaugurate
 inauspicious
 incamp
 incantor
 incapacitate
 incapacity
 incarceration
 incendiary
 incense
 incentive
 incessant
 incessantly
 incestuous
 inchanter
 incident

I N C

incircle
incitement
inclemency
inclinable
incloister
inclosure
include
inclusively
incognito
incoherent
incommode
incompact
incomparable
incompass
incompetent
incomplete
incompose
incomposed
incongruous
inconnexion
inconsiderate
inconsistent
incontient
inconvenient
incorporate
incorrect
incorrigible
incorrupt
incounter
incourage
increated
incredibility
incredulous
incroach
incumbus
inculcate
incumbent
incumbrance
incur
incurable
incurſion

I N N

indearment
indebted
indecency
indecorum
indefatigable
indelible
indemnity
indenture
independent
index
India
Indian
indicant
indictment
indifferent
indigence
indignitate
indignation
indignity
indirectly
indiscreet
indiscretion
indiscriminate
indispensable
indisposed
indisputable
instinct
inditable
individual
indivisibility
indocible
indolence
indorse
indubitable
induce
induction
indulgent
indulto
indurable
indurate
innumerableness

I X W

inobservance
inoculation
inoffensiveness
inordinate
inquiet
inquietness
inrolment
insatiable
insatiableness
inscription
inseparable
insolent
instrument
insupportable
intemperate
intendment
intercommoning
interment
interwoven
inthalment
inveterate
invincible
invulnerable
Joan
Job
jocund
joiner
iron
irrecoverable
Iſis
Israel
isthmus
justification
Justinian
juttle
juty
juvenile
juvenileness
juvenility
ivy
Ixworth

K I C

K I T

K N O

K

Kayage
kedger
keech
keelhalving
keen
keenness
keeper
keeve
keg
kell
Kellington
Kemark
kelp
kelter
kemb
kembo
ken
Kendall
Kenford
kenks
kennel
kennets
kerb
kerchief
Kermes
kern
kernel
kersey
kerstrel
Kewick
ketch
kittering
kettle
Kettlewell
kex key
Keyworth
kibe
kibe-heels
kick
kickshaw

kidder
Kidderminster
kidnap
kidnapper
kidney
kidney-bean
Kigworth
kilbuck
kilderkin
Killgarren
Kilham
kill
killer
kilo
kimnel
kin
kind
kindle
kindly
kindness
kindred
Kineton
kingdom
king like
kingly
Kingsbridge
Kingscleere
Kingston
Kingstand
kinsman
kinswoman
kintal
kipe
Kirk-Burton
Kirk Oswald
Kirkfop Foot
kirtle
kiss
kitchen
kitling
kitten

kittle
klick
klittering
knack
knacker
knag
knaggy
knap
knappish
knappishness
knapple
knappy
knapsack
Knaresborough
knave
knavish
knavishly
knead
kneader
knee holm
kneel
knee-string
knell
knevels
knew
knick-knacks
knife
knight
knight-hood
Knighton
knit
knitter
knob
knobby
knock
knocker
knocking
knoll
knop
knot
knotted

L A P

knottily
knottiness
knotty
know
knowingly
knowledge
knowl
knubble
knuckle
knur
knurling
Krickieth
Kyneton
L
Labyrinth
lachrymation
Laconic
lactation
lady's-bed straw
lambent
Lamborne
lamkin
lameness
lamentable
Lammas
lampadary
Lanbister
Lancaster
Landaff
land-call
Landrino
land lopper
landskip
Langport
language
Languard-Fort
languidness
languor
lankness
lantern
lapidation

L E G

lapwing
larboard
larcency
larder
large
Larlingford
larmier
lasciviously
lashers
lassitude
Lateran
latitude
lattern
laudableness
laudanum
lavender
laughing-stock
Laving-East
launders
lawless
lax
lay-brother
Laystoff
Lazeretto
Lazarole
laziness
lead
leaf
leaguer
Learmouth
learning
least
lecherous
lechery
lecture
Leeds
Leeke
lecte
leetch
leeward way
legacy

L I K

legible
legislative
legitimate
Leicester
Lemington
lemonade
lenity
lent
leopard
leprosy
less
Lessian
Letice
letter
Levant
levee
Liverpool
Levitical
livedness
Lexicographer
Lexicon
liableness
libel
libellous
liberality
liberdine
libertine
librarian
license
licentious
Litchfield
lickorishness
lictors
lie
Lieutenancy
life guard
lift
ligature
lightning
likelihood
likeness

L O F

L O U

L U X

lilack
 Lilburn
 limberness
 limbo
 limner
 limonade
 limpness
 line
 lineament
 lingerer
 linguist
 liniment
 link-boy
 linsey
 Linton
 Lionel
 liquable
 liquation
 liquefaction
 liquor
 lisper
 listener
 litany
 literally
 litigation
 litigious
 Littleton
 liturgy
 livelihoood
 liveliness
 lixivious
 lixivium
 lizard
 lobby
 lobs-pond
 localness
 locram
 locust
 locution
 lodgment
 lofsiness

log
 logarithm
 logarithmical
 logger-head
 logician
 log-wood
 loin
 loiterer
 Lombard
 London
 lonesomeness
 long-boat
 longanimity
 longevity
 longitude
 Long Meg
 Longnor
 long-stanks
 long-winded
 looby
 loof
 looking glass
 loom
 loon
 loop
 loop-lace
 looseness
 lop
 lopper
 loquacious
 loquacity
 lordliness
 lorimer
 loss
 lot
 lothsom
 lottery
 loudly
 Loughton
 lovingness
 Louis d'ors

lousiness
 Louth
 Loughborough
 Low-countries
 lowness
 Lowther
 loxodromy
 loyalness
 lozenge
 lubricity
 lubrify
 lucidness
 Lucifer
 lucky
 lucrative
 lucubration
 Luddelston
 ludicrous
 Ludlow
 luff
 Luffenham
 luggage
 luidore
 lukewarmly
 luminous
 lumpishness
 lunacy
 lunar
 lunatic
 lungwort
 luscious
 lustful
 lustiness
 lunatist
 Luther
 Luton
 Lutterworth
 luxate
 luxation
 luxurious
 ly

M A J

lycanthopist
 lycanthrop
 Lydford
 lymph
 lymphate
 lymphatic
 Lyn
 Lyn-Regis
 lyre
 lyric
 lyrift

M

Maccabees
 Macclesfield
 mace-bearer
 macerate
 Machiavilian
 macination
 machine
 mackrel
 madam
 mad-cap
 maddish
 madness
 madrigal
 magazine
 maggot
 magic
 magician
 magisterially
 magistrate
 magnanimous
 magnet
 magnificate
 magnificence
 magnify
 mag-pye
 Mahometan
 maiden
 majestic
 majesty

M A N

mail
 main-mast
 main prize
 maintain
 maintenance
 major
 make hate
 malady
 Malaga
 malapert
 male-content
 malediction
 malevolence
 malice
 maliciously
 malign
 malignancy
 malkin
 mallard
 malleableness
 Malling-West
 mallows
 Malmsbury
 malmsey
 Malpas
 maltster
 Malvern Magna
 Malvern-Perva
 Malwood Castle
 mamma
 mammoth
 mammon
 management
 Manchester
 mandamus
 mandarin
 mandate
 mandrake
 manfulness
 mange
 mangle

M A R

mang
 manhood
 Manichees
 manifesto
 mankind
 manliness
 manna
 mannerly
 Manningtree
 Mansfield
 man-slaughter
 manteau
 mantlet
 manual
 manufactory
 manure
 manuscript
 maple
 Marantha
 marble
 Marchal-marsh
 marshioness
 Maresfield
 Marforio
 Margam
 margin
 margrave
 marigold
 mariner
 marjoram
 maritim
 Markham
 marker
 marketable
 Market-Street
 Malborough
 Marlow
 marmalade
 marmalet
 marmotto
 marquis

M A T

M E D

M E R

marriage
 Mars
 marshal
 Marshallsea
 marsh-mallows
 martagon
 martial
 martingal
 Martlemas
 Martinmas
 Martock
 martyr
 martyrdom
 martyrology
 marvel
 marvellous
 masculine
 Masham
 mason
 masquerade
 massacre
 massiness
 masterless
 master-piece
 mastership
 mastich
 mastiff
 materiality
 mathematical
 mathematics
 matins
 matric
 matricide
 marticular
 matrimonial
 matrimony
 matrix
 matron
 matrosses
 matted
 matter

mattock
 matrefs
 maturate
 maudlin
 maugre
 maulkin
 maunder
 Maundy
 mawkish
 maw-worms
 maxillary
 maxim
 Maximillian
 May day
 mayor
 mayoralty
 mayores
 May-pole
 Mazzaroth
 mead
 meadow
 meagre
 meal
 mealy
 mealy-mouth'd
 mean
 Menander
 meaning
 meanness
 measurable
 measure
 meawing
 meazles
 meazly
 mechanic
 mechanically
 mechanism
 medal
 medallion
 median
 mediate

mediator
 mediatrefs
 medicable
 medicinable
 medicinal
 medicinally
 mediocrity
 Mediterranean
 medullary
 melancholic
 melancholly
 melasses
 Melicent
 melilot
 meliorate
 melifluous
 mellow
 melodious
 melody
 meltable
 Melton-Mowbray
 member
 membranaceous
 membrane
 memoirs
 memorable
 memorably
 memorandum
 memorial
 memory
 menace
 mendicant
 menial
 menses
 mensurable
 mensuration
 mercantile
 mercenary
 mercery
 mercenariness
 merchandizing

M I G

merchandize
 merchant
 Mercury
 merciful
 Megram
 Meriden
 meridian
 meridional
 merit
 meritorious
 Merlin
 mermaid
 merriment
 Merton
 mess
 mesentry
 message
 messenger
 Messiah
 messuage
 metal
 metalline
 metaphrast
 metaphor
 meteor
 metheglin
 method
 methodist
 metropolis
 Michael
 Michaelmas
 micrography
 micrometer
 microscope
 Midhurst
 Middleton
 Middlewich
 midshipman
 Midsummer
 mis-shapen
 mightily

M I S

migration
 Milbrock
 mildew
 mildness
 Mildred
 mellener
 Milthorp
 Milton
 mimic
 mimical
 mimicry
 mindful
 mineral
 Minerva
 mine
 mingle
 miniature
 minion
 minister
 ministration
 minstrelsey
 minuet
 miraculous
 mirror
 mirth
 misadventure
 misbecome
 miscarriage
 miscellany
 mischance
 misconstrue
 misdoubt
 misfortune
 misgovern
 mislead
 mismanage
 misname
 mispend
 misreckon
 mis-shapen
 mistaken

M O R

Midhurst
 mistiness
 misuse
 mittimus
 mixen
 mixture
 mob
 mock
 Modbury
 model
 moderate
 moderation
 modesty
 modesty
 modulation
 moistness
 molestation
 Moloch
 moment
 monarchy
 Monday
 mongrel
 monkey
 monochord
 monopoly
 monsoon
 Montonist
 Montfort
 monument
 moody
 moor-hen
 mope
 moppet
 moreover
 Morgan
 morn
 Morocco
 Morpeth
 Morpheus
 mortgage
 Morten

M Y T

N E T

N I T

M Y T	N	N I T
Moses	Narcissus	never-more
mosque	narrative	Nevern
motherly	nativity	Nevin
moveable	natural	neurology
moulder	naturalize	neutral
mountebank	naughtiness	new-fangled
Mousshole	navigable	Newgate
mourner	nauseous	newness
mouth	Nazarene	Newark
much	nebulous	Newborn
muck worm	necessarily	Newburg
muddiness	hecessitous	Newbury
multiply	neck-cloth	Newbridge
multitude	necromancer	Newcastle
Munster	Needham	Newmarket
Muntford	needfulness	Newport
murky	needle	Nicene
muscle	nefarious	niceness
Muscovy	negation	nichils
music	negative	St. Nicholas
mushroom	negligence	nick-name
musket	negociate	nick-ninny
mutable	negociator	Nicolaitans
mutation	neighbour	niece
mutter	neighing	niggard
mutton	St. Neots	nightingale
mutual	nephew	night-raven
muzzle	nephritic	night-shade
myriads	Neptune	night-walker
Myrmidons	Neride	Nilometer
myrrh	nergal	nimble
myrtle	nerval	nimbleness
mysterious	nervous	nincompoop
mysteriously	nestling	nineteen
mysteriousness	Nestorians	ninety
mystery	Netherlands	ninthly
mystical	nethermost	nipperkin
mysticalness	nettings	nipple
mythological	nettle	nisi-prius
mythologist	Nettlebed	nitrous
mythology		nittiness

N O R

N U C

O B L

nobleman
nobleness
nocturnal
noddy
odorousness
noggin
noise
noisiness
nomenclator
nomenclature
nominal
nominate
nomination
nominative
non-appearance
non-compliance
non-conformist
non-conformity
Noneaton
nonentity
non-naturals
non-plus
non-resistance
nonsense
nonsensical
non-solvent
non-suit
nook
nooning
noose
Normal
Norman
Norroy
Noise
north
North-Allerton
Northampton
North-Bury
North-Church
North-Curry
northerly

North-Fleet
North-Foreland
North-Leech
northward
Northwich
Norwich
nose
nose-gay
nostril
nostrum
notable
notary
notation
nothing
notification
notify
notion
notional
notoriety
notoriousness
Nottingham
notwithstanding
Novatians
novel
novelist
novelty
November
novennial
nought
novice
novitiate
nourishing
nourishment
nourish
now
noxious
noxiousness
nubble
nubbled
nubilous
nuciferous

K k

nuddle
nudils
nudity
nugatory
nullify
numberless
numerable
numeral
numerator
numerous
num-scul
nunciator
nuncupation
nuncupative
nuncupativeness
nunnery
nuptial
nurle
nurture
nursance
Nursley
nutmeg
nutrition
nutritive
nuzzle
nymph
nymphal
Oakham
oaker
oath
oatmeal
obduracy
obedience
obeisance
obelisk
obey
objection
objector
objuration
oblation

O C C

obligate
obligatory
oblige
obligee
obligement
oblique
obliterate
oblivion
oblivious
oblong
obloquy
obnoxious
obnubilation
obscene
obscenely
obscenity
obscurity
obsequious
obsequies
observable
observant
observation
observator
observatory
observe
obsolete
obstacle
obstinacy
obstinate
obstreperous
obstruct
obstruction
obtain
obtrude
obtruder
obtrusion
obviate
obvious
occasional
occult
occultness

O I L

occupation
occupier
occur
occurrence
ocean
Okeham
Okehampton
oker
oldish
oleaginous
olfactory
olitory
Olympiad
Olympic
Ombersley
ombre
Omega
omen
ominous
omission
omnipotence
omnipresence
omniscience
onerate
Ongar-High
opacity
opacious
opakness
open-arse
operate
operation
operator
ophthalmic
opiate
opinion
opinionative
opinionated
opium
opponent
opportune
opportunately
opportunity

O P P

oillet-hole
oiliness
ointment
oister
Okeham
Okehampton
oker
oldish
oleaginous
olfactory
olitory
Olympiad
Olympic
Ombersley
ombre
Omega
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ominous
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omnipotence
omnipresence
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Ongar-High
opacity
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open-arse
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operation
operator
ophthalmic
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opinionative
opinionated
opium
opponent
opportune
opportunately
opportunity

O R I

O S T

O V I

opposition
 oppression
 oppressor
 opprobrious
 opprobrium
 oppung
 opite
 optic-glass
 opulence
 opulent
 oracle
 oracular
 orange
 orangery
 oration
 orator
 oratory
 orb
 orbicular
 orbit
 orchard
 ordain
 ordalain
 orderer
 orderliness
 ordinal
 ordinance
 ordinariness
 ordinary
 ordination
 ordnance
 ordonnance
 ordure
 Oxford
 organ
 organical
 organicalness
 organist
 organization
 organiz'd
 orient

oriental
 original
 originalness
 Orion
 orison
 Ork
 Orkneys
 Orlando
 Orlop
 Orlton
 Ormskirk
 ornament
 ornamentalness
 ornithologist
 ornithomancy
 Oroonoko
 orphan
 orphanism
 Orpheus
 orpiment
 Orrery
 ortice
 orthodox
 orthogonal
 orthographer
 orthographical
 orthography
 Orton
 Orton-Maddock
 orvietan
 oscitant
 oscitation
 osier
 Osiris
 Osmandston
 Osmund-Royal
 osprey
 Ostend
 offensive
 ostentation
 ostentatious

osteology
 ostler
 ostrich
 Ostrogoths
 Oswestry
 Osyth
 otherwise
 Otley
 Ottoman
 oval
 ovation
 oubut
 oven
 over-act
 over-balance
 over-bear
 over-board
 over-charge
 over-clouded
 over-done
 over-eat
 over-fill
 over-grown
 over-hastiness
 over-laden
 over-match
 over-plus
 over-power
 over-poise
 over-reach
 over-seer
 over-shadow
 Overton
 over-top
 overture
 over-turn
 over-value
 over-weening
 overwhelm
 Ovid
 Ovingham

P A L

oviparous
Oulney
ounce
Ouse
out landish
outward
out-lawry
outrageous
outrun
outwardly
out-works
ouzel
Owen
owler
owner
Oxford
Oxwich
oxygen
oyer
oyez
ozier

P

Paddington
paddle
padlock
padnag
Padstow
Padua
paganism
pageant
pagod
Pamphill
pain
Pain's Castle
painful
painim
paint
painter
paintstrainer
palace
palatable

P A P

Palatine
paleness
palinody
palish
Palladium
pallate
palliation
Pall-Mall
palmer-worm
palmestry
palm tree
palpable
palpitation
Palsgrave
palsy
paltry
pamper
pamphlet
pan
panado
pan cake
Pancras
pancreas
Pandeis
pander
Pandora
panegyric
pangs
panic
pannage
pannel
pannier
pant
panting
pantaloons
Pantheon
panther
pantoffe
pantry
papacy
papism

P A R

papist
papistry
pappa
Papplewich
pappiness
par
parable
parabola
parabolical
Paracelsus
paradise
paradox
paragraph
parallel
paralytic
paramour
paraphrase
paraphrastical
parafceve
parbol
parcel
patchment
pardon
pardonner
parentage
parenthesis
partitioner
parley
parliament
parliamentary
parlour
parmesan
parochial
parole
parricide
party
parsimonious
parsimony
parsley
parsnip
parson

P A T

P E N

P E R

partake
partial
participate
participation
participial
particle
particular
particularly
parting
partisan
partnership
partridge
pash
pasquin
passable
passage
passenger
passibleness
possible
passion
passionate
passive
passover
passport
pastime
patry
pasty cook
patacoon
patcher
patch box
patentee
pathetic
pathetical
patience
patientsess
patriarch
patriarchship
patrician
patrimonial
patrimony
Patriington

patriot
patriotism
patrol
patron
patronage
patronize
patty
paucity
pave
pavilion
pause
pawn
pawnbroker
payable
payment
peacock
pearmain
peasant
pebble
peccadillo
peccavi
pectoral
peculiar
pedagogue
pedantic
pedigree
pedo baptism
peerdom
peevish
peevishness
Pegasus
Pelagians
pelican
pelmel
pelt monger
Pembroke
Pembroke
penal
penalty
penance
pence

pencil
pendant
Pendennis Castle
pendulum
penetrable
penetrate
penetration
Penguin
peninsula
Penistone
penitent
pen knife
pennant
penniless
Pennystone
Pennyfont
pennyroyal
Penraddock
Penryn
Penfance
pension
pensionary
pensive
pensiveness
pentagon
pentateuch
Pentecost
penurious
pepper
peradventure
peragrations
perambulation
perceive
perception
perch
percolation
perdition
perduration
peregrination
peremptory
peremptorily

P E R

peresial
perfect
perfection
perfidious
perfidy
perforate
perforce
perform
perfume
perfunctory
perhaps
pericranium
perilous
period
periodical
peripatetic
periphery
periphrastically
perish
perishableness
perjure
perjury
periwig
periwinkle
permanent
permission
permit
permutation
pernicious
peroration
perpendicular
perpetrate
perpetual
perpetuation
perpetuity
perplex
perquisites
Persbridge
Pershore
Persia
persecute

P H I

perseverance
persevere
persist
personable
personage
personality
personate
perspective
perspicuity
perspicuous
perspiration
persuasive
persuasion
persuasiveness
pertain
pertinacious
pertinence
pertinent
perturbation
Peru
pervade
perverse
pervert
pervicacious
Peruvian
pestilence
petardeer
Peterborough
Peter-Church
Peter-field
Petherton-South
Petherton-North
petrification
pettifogger
pettulancy
phantastical
Pharisee
pharmaceutic
philanthrophy
Philip's Norton
philologer

P O M

philosopher
philosophical
phlebotomize
phlegmaticness
Phosphorous
phrase
Phrygian
physic
physognomy
pizza
pickage
Pickering
Picts
pierce
pigmy
pilchard
plant
plantation
pleasure
pliant
plough
plumb
plunder
Plymouth
pneumatical
poach
pocket
poetry
poinant
political
politician
polisher
polite
polling
Polverbatch
polygamy
polygraphy
pomander
pome-citron
pomiferus
pommel

P U E

pompous
pond
ponderous
Pontepool
pontificate
Pontepolen
pope
popinjay
porcupin
pork
portcullis
porter
Portsmouth
positive
possession
postage
posterior
posthumous
posture
potentate
practicable
pragmatical
praise
prawn
preacher
precarious
precedence
predestinate
pre-eminence
preference
pregnance
prejudication
prelate
premature
prenomination
pre-occupy
preposterous
presbyterian
public
pudder
puerility

P U R

puffing
pugil
puissant
pulchritude
Pulford
Pulham
Pulhely
pullet
pulmonery
pulpit
pulsation
pulverization
pumice
pummel
pumpkin
punch
punchanello
punchion
punctilio
punctuation
puncture
pungency
pungently
punger
punic
punish
punishment
punk
puppet
puppy
purblind
purchase
pureness
purgation
purgatory
purification
puritanism
purling
purloin
purport
purpose

P Y X

purring
purser
purflain
pursuance
pursuit
pursuivant
Purton
purvey
purveyance
purulent
push-pin
pusillanimity
puss
pustulous
put
putanism
putative
putid
put-off
putter
putrefaction
putresce
putrid
putridness
puttock
putty
puzzle
pybald
pye
pygmy
pylorous
pyramid
pyramidal
pyramidiol
pyromancy
pyrotenchny
Pythagoras
Pythagorean
Pythones
pyx

Q U A

Q
 Quadragessima
 quadragessimal
 quadrangle
 quadrangular
 quadrant
 quadrantal
 quadrat
 qandrate
 quadratic
 quadratix
 quadrature
 quadrimonial
 quadripartite
 quadripartition
 quadrifyllable
 quadrivial
 quadruple
 quadruplication
 quaffer
 quag-mire
 quail
 quaint
 quaintly
 quaintness
 quake
 quaker
 quakerism
 qualification
 qualifie
 qualifying
 quality
 qualm
 qualmishness
 quandary
 quantity
 quarelian
 quarrel
 quarreller
 quarrelled
 quarrelling

Q U E

quarrellsome
 quarrellsomeness
 quarry
 quart
 quartan
 quarter
 quarter-day
 quarteridge
 quarterer
 quarterly
 quarter-master
 quarter-round
 quarter-sessions
 quatern
 quarter-staff
 quarto
 quash
 quaver
 quean
 queen
 Queenborough
 queer
 queerness
 quell
 queller
 quench
 quenchable
 quencher
 querent
 querist
 querk
 querulous
 query
 quest
 quest-man
 question
 questionable
 questionableness
 questionist
 questionless
 questor

Q U O

quibble
 quick
 quicken
 quickly
 quickness
 quicksand
 quickset
 quicksilver
 quick-sighted
 quick-witted
 quicky-tree
 quid
 quiddany
 quiescence
 quiescent
 quiet
 quieter
 quietism
 quietist
 quietly
 quietness
 quill
 quilt
 quince
 quincunx
 quinsy
 quint
 quintain
 quintal
 quintessence
 quintessential
 quintil
 Quintilian
 quire
 quirister
 quit
 quit-claim
 quite
 quit-rent
 quiver
 quoted

Rabb
 Rabb
 rabbl
 race
 racke
 racko
 radian
 radian
 radica
 radica
 radica
 raddis
 radius
 Radne
 raff
 raffle
 rage
 rag bo
 raggar
 ragged
 Raglan
 rag m
 ragoo
 rail
 railery
 Rainu
 rainbo
 rain d
 raip
 raise
 rake
 rake-h
 rakish
 Raleigh
 Ralph
 ramaz
 ramble
 ramag
 Ramiss
 ramme

R A M

R A V

R E C

R

Rabbi
 Rabbin
 rabble
 race
 racket
 rackoon
 radiancy
 radiant
 radicalness
 radical
 radicate
 raddish
 radius
 Radnor
 raff
 raffle
 rage
 rag bolts
 raggamuffian
 ragged
 Ragland-Castle
 rag man
 ragoo
 rail
 railery
 Raimund
 rainbow
 rain deer
 raip
 raise
 rake
 rake-hell
 rakish
 Raleigh
 Ralpho
 ramazan
 ramble
 ramage
 Ramish
 rammer

Ramsbury
 Ramsey
 ram's-head
 rancid
 rancour
 Randal
 random
 ranger
 rankness
 rankly
 ransom
 ransomer
 rantipole
 rapacious
 rapid
 rapine
 raparee
 rapsody
 rapture
 rarely
 rarity
 rascal
 rascally
 rase
 Rason-Market
 rashness
 razor
 ratafia
 rather
 ratification
 ratifie
 rational
 rats-bane
 rattle
 rattle-snake
 ravelin
 Raven glass
 ravenous
 raving
 raving-mad
 ravisher

raze
 reach
 re-action
 readiness
 Reading
 re-admission
 re-admit
 real
 realize
 realm
 re-animate
 reascend
 reaper
 rear-guard
 reason
 re-assemble
 re-assume
 re-baptize
 rebate
 rebatement
 rebel
 rebellious
 rebound
 rebuff
 rebuild
 rebuke
 recal
 recant
 recantation
 recapitulate
 recede
 receivable
 receiver
 receiver general
 recent
 recentness
 recess
 Reche
 recipe
 reciprocal
 reciprocate

R E D

recital
 recitativo
 recite
 reciter
 reckoning
 reclaim
 recline
 recognition
 recognize
 recognizer
 recoil
 recollect
 recollection
 recompence
 recommend
 recommendation
 recompense
 recompose
 reconcile
 reconcilable
 record
 recorder
 recover
 recoverable
 recount
 recreate
 recruit
 rectangular
 rectify
 rector
 rectory
 Reculver
 recumbence
 recumbent
 recurrent
 recussion
 Redborn
 Redbridge
 reddish
 redeem
 redeemer

R E L

re-deliverance
 Redford
 ridiculous
 redouble
 redound
 Redruth
 Red-sea
 reduction
 redundant
 re-edifice
 re-entrance
 re-establish
 re-examination
 reference
 refinement
 reflexion
 reformation
 refractory
 refresh
 refulge
 refusal
 regain
 regality
 regard
 regeneration
 regiment
 region
 register
 regret
 regular
 rehearse
 reject
 reign
 re-imbark
 rejoin
 rejoice
 relation
 release
 relent
 relief
 religion

R Y E

reluctant
 remain
 remarkable
 remedy
 remember
 remit
 remnant
 remonstrate
 remorse
 removeable
 rencounter
 rendezvous
 renegade
 renovation
 renounce
 renown
 rent
 repair
 reply
 reprint
 reproach
 reproof
 repute
 resemble
 resolve
 resolute
 resort
 rest
 rheumatism
 rich
 riddle
 ride
 river
 robe
 rogue
 Roman
 royal
 rude
 run
 rush
 Rye

S A L

S A T

S C A

S

Sabellians
 Sabines
 sable
 sabre
 Sabridgworth
 sacerdotal
 sack-cloth
 sacrament
 sacred
 sacrifice
 sacrilege
 sadden
 saddle
 Saddleworth
 Sadducee
 safe conduct
 safeguard
 saffron
 Saffron-Walden
 sagacious
 sagely
 Sagittary
 sainfoin
 salamander
 salary
 sale
 salesman
 salique
 Salisbury
 saliva
 salivate
 Salkeld
 sally-port
 salmigundy
 salmon
 saltash
 falter
 Saltfleet
 salt-petre
 salvage

salubrious
 salver
 salvo
 salutary
 Samaria
 Samaritan
 Samech
 samphire
 sampler
 sanctification
 sanctimony
 sanction
 sanctuary
 Sanbach
 sandbag
 sand-blind
 Sandbury
 sand-eels
 Sandgate-Castle
 Sandhurst
 sandlin
 Sandown-Castle
 Sandwich
 sandy
 Sandy-Chapel
 sanguin
 Sanhedrim
 santer
 saplessness
 saraband
 Saracen
 sarcasm
 sarcastically
 sarfenet
 Sar-street
 saffrafras
 Satan
 satchel
 satellites
 satiate
 satiated

satisfaction
 satisfie
 fatten
 Saturday
 Saturn
 Saturnine
 fatyr
 fatyrically
 fatyrift
 savageness
 fauce-box
 faucer
 fauciness
 fausage
 fave-all
 saving
 saviour
 saunter
 savory
 Savoy
 Savoyard
 Sawley
 Sawthey
 Saxmundham
 Saxon
 Saxony
 scab
 scabbard
 scabbed
 scabbedness
 scaffold
 scaldo
 scalding hot
 scalp
 scamper
 scandal
 scandalous
 scantiness
 scar
 scaramouch
 Scarborough

S C R

scarcity
 scare-crow
 scarlet
 scatter
 scavenger
 skeleton
 scene
 scenography
 sceptic
 scepter
 scheme
 schism
 scholar
 scholastic
 scholiast
 school
 school-divine
 schoolman
 science
 scimeter
 scirrhus
 scissors
 scoffers
 scold
 scolding
 scollop shell
 scone
 scooper
 scorbutic
 score
 scornful
 scorpion
 Scotch
 Scotland
 scoundrel
 scout
 scraggy
 scramble
 scrap
 scraper
 scratches

S E C

screek
 scribe
 scriptural
 scripturist
 scrivener
 scrofulous
 scrutinize
 scud away
 sculk
 scull
 scullion
 sculpture
 scum
 scupper hole
 scurrilous
 scurviness
 scutcheon
 scymitar
 Scythia
 Scythian
 scythe
 sea chart
 sea-faring
 Sea ford
 sea-green
 seal
 seamster
 Sean
 sea-port
 search
 fear
 fear-cloth
 Searn
 Searn-Abby
 seasonable
 Sebastian
 secant
 secession
 seclusion
 secondarily
 secret

S E N

secretary
 sect
 sectarian
 section
 secularity
 secureness
 sedan
 sedate
 Sedber
 Sedbury
 Sedgefield
 Sedgewick
 sediment
 seditious
 seducer
 seduction
 seek
 seem
 seen
 seethe
 seize
 seldom
 select
 self
 selfish
 self-evident
 selvage
 semicircle
 semicolon
 seminal
 semi-vowel
 senate
 send
 seniority
 sen-night
 sensation
 sense
 sensitive
 sensory
 sent
 sentence

S H O

S K I

S P I

shallow
 shaloon
 shambles
 shame-fac'd
 sharp
 sharper
 sharp-sighted
 sharp-witted
 shatter
 shaver
 Shaw-Cross
 Sheals N. and S.
 shear man
 sheep-cote
 sheepishness
 Sheffield
 shelf
 Shepham
 shepherd
 shepherdess
 Sherborn
 sheriff
 sherry
 Sherston
 shew-bread
 shield
 shifter
 shilling
 Shiloh
 shin-bone
 shingle
 ship wash
 Shipwrack
 shitten
 shittle-cock
 shop keeper
 shop-lifting
 Shoreham-New
 short-sighted
 shoulder
 shoulder-knot

Shrawarden
 shrewdly
 Shrewsbury
 shrivell'd
 shrubbiness
 shinefs
 Sicilian
 Sicily
 sickness
 side-board
 sideral
 Sidland
 Sidmouth
 sieling
 sightless
 signal
 signet
 signification
 signifie
 Silchester
 silentness
 sillabub
 silliness
 Silverton
 silver-smith
 simonical
 simper
 simplation
 simulation
 sincereness
 sinewiness
 singleness
 singularity
 sirenizing
 Sittingborn
 Sittingham
 sixteenthly
 skegger-trout
 Skellingthrop
 skepticalness
 skilfulness

Skinninggrave
 Skirking
 skirmisher
 skittishness
 sky-colour
 slab
 slanderous
 slavishness
 Sleaford
 sleeveless
 slightrness
 slipperiness
 sloe-worm
 slothfulness
 sluggish
 smacking
 smectymnuans
 smitter
 Smokington
 snap dragon
 sneakingness
 Socineanism
 solemnization
 solicitude
 Solomon's seal
 Somersetshire
 songster
 sophistical
 fordid
 South-Moulton
 Southwold
 spacious
 spangle
 Spaniard
 speaker
 specific
 spectator
 speech
 Sphinx
 Spilsby
 spinage

S P R

S Q U

S T A

spinal
 spinet
 spinner
 spinster
 spire
 spirit
 spiritual
 spiritualness
 spit
 spire
 spiteful
 spittle
 splash
 splatch
 splay-footed
 spleen
 splendid
 splendor
 splenetic
 splent
 splice
 split
 spoil
 spoke
 spokesman
 spoliation
 spondee
 sponsal
 spontaneous
 spook
 spoon
 sport
 sportful
 spot
 spotless
 spouse
 spout
 sprain
 sprat
 sprawl
 spray

spread
 sprig
 spright
 spring
 spring-tide
 sprinkle
 sprit-sail
 sprout
 spruce
 sprung
 sprunt
 spud
 spue
 spume
 spun
 sponge
 punk
 spur
 spuriousness
 spurkets
 spurn
 spur-rial
 spurt
 spy
 squab
 squabble
 squadron
 squalled
 squalley
 squander
 square
 squareness
 squash
 squat
 squawl
 squeak
 squeal
 squeamish
 squeeze
 squib
 squill

squinancy
 squint ey'd
 squire
 squirt
 St.
 stab
 stable
 Stabridge
 stack
 Stafford
 stage
 stagger
 stagnate
 Stagarite
 staid
 stain
 stairs
 stake
 stale
 stak
 stail
 Stamford
 stamp
 Stanbridge
 stanch
 standish
 stand
 Stanford
 stang
 Stanhope
 stank
 stannary
 Stanton
 stanza
 stapple
 starboard
 starch
 stare
 starling
 starry
 start

start
 starv
 state
 state
 static
 statu
 statu
 stave
 stay
 stead
 steak
 steal
 steam
 Stebb
 Redf
 need
 steel
 steep
 Steeph
 steer
 Steere
 stem
 Stench
 step
 step-f
 step-m
 steril
 sterlin
 stern
 stew
 Stewar
 stickle
 sticky
 stiff
 stife
 Stigma
 stile
 still-bo
 Stilton
 stimula
 sting

S T I

S T R

S T U

startup
 starve
 state
 statesman
 stationer
 statue
 statute
 slave
 stay
 stead
 steak
 steal
 steam
 Stebbing
 stedfast
 seed
 steel
 sleep
 steeple
 steer
 steerer
 stem
 stench
 step
 step-father
 step-mother
 steril
 sterling
 stern
 stew
 steward
 stickle
 sticky
 stiff
 stifle
 stigmatical
 stile
 still-born
 Stilton
 stimulate
 sting

stink
 stint
 stipend
 stipulate
 stir
 stirrup
 stinch
 stiver
 stock
 stockings
 Stockton
 stoic
 Stoke
 stole
 stomach
 stomacher
 Stone
 stood
 stook
 stool
 stoop
 stop
 store
 stork
 storm
 story
 stote
 stove
 stout
 stowage
 straddle
 straggle
 straight
 strain
 strait
 strake
 strand
 strange
 stranger
 strap
 Stratton

straw
 stray
 streak
 stream
 street
 strength
 strenuous
 stress
 stretch
 Stretham
 strew
 stricken
 strictness
 stride
 stufe
 strike
 string
 stripe
 strive
 strode
 strole
 strod
 strong
 struck
 struggle
 trumpet
 stung
 stubbed
 stuble
 stubborn
 stuck
 stud
 student
 studdy
 stuff
 stumble
 stunt
 stupendous
 stupid
 stupify
 stupifaction

S U P

S Y N

T A N

Sturbridge	superlativeness	syncopation
Sturminster	supernumerary	synod
stutteringly	superstitiousness	synodical
stypcness	supervention	synonymous
subaction	supplentory	synopsis
subaltern	supportableness	syntax
sub-consequence	suppressor	synthesis
subdivision	superamundane	synthetical
subdue	supremeness	syringe
subjection	sureness	syrup
subjunctively	surgeon	system
sublieutenant	surpassingness	ysstole
sublimation	surround	T
submersion	suspect	Tabernacle
submissiveness	suspiciousness	tablature
subordinateness	sustenance	tabular
subscription	swagger	tacking
subservientness	swarm	Tadcaster
substantialness	swear	Taddington
subterraneous	sweep stake	Tafford-Bridge
subtraction	sweet heart	tag-rag
succedaneous	swept	tailor
successfulness	swimmer	Talbot
succinctness	swine-herd	taie-bearer
succulentness	swinishness	talisman
succumbent	switch	talkative
sudorificness	Switzerland	tallow
sufficientness	swordsmen	Tallow-down
suffumigation	sycophant	tally-man
suitableness	syllabically	Talmud
sulphurous	sylogistically	Talmedical
summariness	Sylva	Talysarn
sumptuousness	Sylvester	tamarind
Sunderland	symbolical	tamely
superabundance	symmetry	Tammuz
superannuation	sympathetic	tamper
supereminence	sympathize	Tamworth
superexcellent	symphony	Tangier
superficialness	symptom	Tanhill
superfluousness	synagogue	tankard
superintendent	synchronism	tantalize

T E N

T H I

T I M

tantivy
 tapestry
 tapester
 tarantula
 target
 tarnish
 tart
 tartane
 Tartar
 Tartary
 tasteless
 tatterdemalion
 tattoo
 taverner
 Tavestock
 tauntingly
 tautological
 tautology
 Taunton
 Taunton-bishop's
 tawdry
 taxation
 teachable
 team
 technology
 tedious
 telescope
 temperate
 tempest
 templar
 temple
 temporal
 temporize
 tenable
 tenacious
 tenantable
 Tenbury
 Tenby
 tendency
 tender-hearted
 tenderly

tenderness
 tenement
 Teneriff
 Tenderden
 tent wort
 Teraphim
 termagant
 termination
 terraqueous
 terrestrial
 terrible
 terrific
 Terring
 territory
 terror
 testaceous
 testament
 testific
 testimonial
 testiness
 Tetbury
 Tetworth
 Tettershall
 Teutonic
 Tewksbury
 texture
 Thames
 thankfulness
 theatre
 theme
 Theocracy
 theologian
 thereafter
 thereupon
 thermometer
 thermoscope
 Therston
 Thetford
 thicken
 thicket
 Thickham

thief
 thieviness
 thimble
 thinker
 thirstiness
 thistle
 Thong-Castle
 Thorn
 thornback
 Thornbury
 Thorncomb
 through
 Thorp
 thoughtful
 thousand
 thraldom
 thrasher
 threadbare
 threefold
 Threlked
 thresher
 throng
 throttle
 throwster
 Thummin
 Thursday
 Thurston
 thwart
 Tickhall
 ticking
 tickle
 tick-tack
 St. Tiddy
 tidings
 tightness
 Tilbury
 tillage
 tilt-boat
 tilt-yard
 timbrel
 timorous

T O W

T R A

T Y P

timorousness	toy-man	transverse
tinker	tractable	trash
Tinmouth	tractate	Travegarn
tinsel	tradesman	traveller
tirewomen	trade-wind	trecherous
Titchwoman	tradition	treachery
titillation	traduce	treasonable
tit-mouse	trage-comedy	treasurer
Tiverton	trage-comical	Tegaron
tobacco	tragical	Treleigh
Tocester	trainbands	tremble
Tockington	train-oil	trepanner
together	traiterous	trepidation
toilsome	tranquillity	trepidity
toilsomeness	transaction	Treshevimick
Toledo	transcend	Trevilan
tolerable	transcribe	tribulation
toleration	transcript	tribunal
Toll booth	transfer	trickish
tongue	transfiguration	triennial
tooth ach	transfigure	triflingly
toothsome	transfuse	Trigney
topaz	transgress	trigonometry
Topcliff	transgressor	Trinitarians
toyer	transient	Trinity
Tophet	transition	Tripoly
topography	transitoriness	troublesome
Topsham	translation	Tubal
topsy-turvy	transmigration	Tuddington
torment	transmography	Tudworth
torrent	transmutable	Tuilleries
Torrington	transparent	Tukesbury
torture	transpiration	tulip
tory	transpire	tumour
St. Toffel	transplant	tumourous
Totness	transport	Tunbridge
touch stone	transporter	turnpike
toughly	transpose	turnpike-gate
tournament	transposer	Tweed
toward	transposition	typographical
township	transubstantiation	typographically

V A S

V E R

V I A

typographer
typography
tyrannical
tyrannically
tyrannicalness
tyrannicide
tyrannize
tyrant
tyranny
tyro

V and U

Vacuum
vade mecum
vagabond
vagary
vagrant
vain-glorious
vain-gloriousness
valedictory
valetudinary
valiant
valid
validity
valorous
valuable
vambulance
Vandal
vane
van-guard
vanish
vanity
vanquish
vaporation
vapour
vapouring
variable
variance
variation
variety
varlet
vassal

vast
Vatican
Vavasor
Vaudois
vaunter
vaunt
veal
vegetable
vehemence
vehicle
vellum
velocity
velvet
venal
venerable
veneration
venereal
venery
Venetian
vengeance
venial
Venice
venom
venomous
ventilation
venturesomeness
venturous
Venus
varacity
verb
verbal
verbatim
verberate
verberation
verbose
verboseness
verbosity
verdant
verdigrise
verderer
verditer

verdure
verger
verification
verjuice
vermicular
vermiculation
vermillion
vermin
vernacular
vernal
verse
versicle
versification
versifie
vertex
vertiginous
vertigo
vervain
very
vesicle
vesicatory
vespers
vessel
vesses
vest
Vesta
Vestal
vestible
vestiger
vestment
vestry
vestry man
vesture
vetches
veteran
vex
vexatious
vexatious
ugly
ugliness
vial

V I N

viands
viaticum
vibrate
vibrating
vibration
vicar
vicarage
vicarship
vice
vicious
vice-admiral
vice-chancellor
vice-gerent
vice-roy
vice-royalty
vicinity
vicinage
vicissitude
victim
victor
victoriously
victory
viſtaller
viſtuals
Vienna
view
vigil
vigilant
vigorous
vigour
vileneſs
vilife
village
villager
villainous
villainouſly
villainy
Vincent
vincible
vindication
vindictive

V I S

vine
vineyard
vinegar
vine w
vient
vinous
vintage
vintner
vintreſs
vintry
violable
violate
violation
violence
violent
violentneſs
violin
violencello
viper
virgo
virgin
virginals
Virginia
virginity
virid
virile
virility
virtual
virtuoſo
virtuouſly
virulency
virulent
virulently
virulentneſs
viſage
viſera
viſcount
viſcounteſs
viſcous
viſcouſneſs
viſibility

U N A

viſibleneſs
viſible
Viſier
viſion
viſionist
viſit
viſitation
viſney
viſual
vital
vitalneſs
vitiate
vitious
vitiousneſs
vitreal
vitreous
vitriſe
vivace
vivacious
vivacity
Vivian
vivid
vivification
vivify
viviparous
vixen
vizard
ulcerate
unceration
ulcerous
ullage
ulnage
ulterior
ultimate
Ulverſton
umber
umbrage
umbrella
umpire
unacceptable
unaccountable

unaccu
unacqu
unactiv
unadv
unaffec
unaide
unalter
unanin
unanſw
unarme
unnarra
unafflit
unatter
unattra
unavoic
unawak
unawar
unbeco
unbegot
unbelie
unbelie
unbend
unbidd
unblam
unblind
unbloo
unboile
unboot
unboun
unbowe
unbridl
unbuilt
unbotto
uncapal
uncerta
unchan
unchar
unchaſt
unchriſ
unchur
uncircu

U N C

U N D

U N H

unaccustomed	uncivil	undress
unacquainted	unclasp	unduly
unactive	unclean	undutiful
unadvised	unclothe	uneasy
unaffected	uncomfortable	uneloquent
unaided	uncomely	unemployed
unalterable	uncommon	unequal
unanimity	unconcerned	unerring
unanswerable	unconceivable	uneven
unarmed	uncondemned	unexecuted
unarrayed	unconformable	unexpected
unassisted	unconquerable	unexpert
unattentive	unconquer'd	unexpressible
unattainable	unconscionably	unfairly
unavoidable	unconstant	unfaithful
unawaked	unconstrained	unfashioned
unawares	uncontestible	unfasten
unbecoming	uncontrolable	unfeigned
unbegotten	uncorrected	unfenced
unbelief	uncover	unfinished
unbelieve	uncounteous	unfitted
unbend	uncrowned	unfold
unbidden	unction	unformed
unblamable	uncultivated	unforseen
unblind	uncustomed	unfortified
unbloody	undaunted	unfortunate
unboiled	undecided	unfound
unbooted	undefiled	unfriendly
unbound	underling	unfruitful
unbowel	undermine	ungainful
unbridled	understand	ungarnished
unbuilt	undertake	ungenteel
unbottom	undervalue	ungird
uncapable	undervalument	ungodliness
uncertain	under-written	ungovernable
unchangeable	undeserved	ungracious
uncharitable	undetermined	ungrateful
unchaste	undisciplined	unguent
unchristened	undistinguishable	unhabitable
unchurched	undivided	unhandsomely
uncircumspect	undoubted	unhandy

U N M

unhappily
 unhappy
 unharbour
 unharnessed
 unhealthful
 unhealthy
 unhealthily
 unheard
 unholy
 unhook
 unhorse
 unhusbanded
 unicorn
 unison
 unitarian
 universe
 unjust
 unkind
 unknown
 unladed
 unlamented
 unlawful
 unlearn
 unlearned
 unleavened
 unlicensed
 unluckiness
 unlimited
 unload
 unloose
 unlovely
 unlucky
 unmanly
 unmanliness
 unmannerly
 unmarried
 unmasked
 unmatched
 unmeasurable
 unmeetness
 unmerciful

U N R

unmindful
 unmolested
 unmovable
 unmould
 unnatural
 unnecessary
 unneedful
 unoccupied
 unopposed
 unorderedly
 unpaid
 unparallel'd
 unpardonable
 unpeaceable
 unpeople
 unperceivable
 unperfect
 unpleasing
 unpolished
 unpoll'd
 unpremeditated
 unprejudiced
 unprepared
 unprevented
 unprofitable
 unprosperous
 unprovided
 unpruned
 unpunished
 unpurged
 unquenched
 unquiet
 unravel
 unready
 unreasonable
 unrebukable
 unreclaimed
 unreformed
 unregarded
 unrelenting
 unremitted

U N S

unremoved
 unrepaired
 unresolved
 unrespectful
 unrevenge'd
 unrewarded
 unrighteous
 unruly
 unsaddle
 unsafe
 unsaid
 unsaluted
 unsanctified
 unsatisfactory
 unsavory
 unscriptural
 unsealed
 unsearchable
 unseparable
 unserviceable
 unsettled
 unshaded
 unshaken
 unshaven
 unshod
 unskilful
 unsuared
 unsociable
 unfold
 unsolid
 unsound
 unspeakable
 unspent
 unspotted
 unstable
 unstained
 unsteady
 unstirred
 unstop
 unstring
 unsuccessful

U N W

U R G

W A L

unsuitable
unsure
untaken
untamed
untangle
untanned
unteachable
untenable
unthankful
unthanking
unthoughtful
unthriftilly
until
untilled
untimely
untoward
untractable
untried
untrimmed
untrue
untruth
untrustiness
untunable
unvail
unversed
un-uniform
unusual
unusually
unutterable
unwarily
unwary
unwashen
unwasted
unwater'd
unwearied
unweariedness
unwedded
unwelcome
unwholesome
unwholesomeness
unwieldiness

unwilling
unwind
unwise
unworn
unworthy
unwound
unwrotten
unyoke
vocabulary
vocal
vogue
voice
void
voider
vidness
volacious
volatile
volition
voluble
volume
voluntary
voluntier
vomit
voracious
votary
votive
voucher
vouchsafe
vow
vowel
voyage
upbraid
Uphilhaven
upright
uproar
upside
upstart
Upton
upward
urbanity
urge

urgent
urinal
urine
urn
Ursulines
usage
usance
use
useful
usher
Uskmouth
usual
usurp
usurpation
usurer
usury
utensils
urible
utmost
Utopian
utter
vulnerable
vulnerable
vulpine
vulture
uvula
Uxbridge
uxorious
uxoriously
uxuriousness
Uzziah
Uzziel

W

Waggoner
Wainfleet
wainscot
waiter
waiward
Wakefield
wakeful
Walce

W A S	W A Y	W E D
Walfleet	waft	way · wood
Walgrove	wafte	we
wall	wastefully	weak
Wallasse	wastefulness	weaken
wallet	Wat	weakly
Walloons	watch	weakness
wallop	watcher	weal
wallow	Watchet	weald
wallowish	watchful	wealth
Walmer	watchfully	wean
walnut	watchfulness	weaning
Walsingham	water	weapon
Walton	water-measure	weaponless
wamble	water · poise	weapon · slave
wander	waterage	wear
wanton	watergang	wearied
wantonness	waterish	wearily
war	waterishness	weariness
Warbridge	watery	wearisome
warden	Watford	wearisomeness
wardenship	Wath	weary
wardmote	Watling · street	wcasand
wardrobe	Watlington	wcasal
Ware	wattle	weather
warfare	Wattleton	weather · by
wariness	Watton	weather board
warm	wave waver	weather · cock
warmness	waveringly	weather · gage
Warnford	wavy	weather · glass
warrant	wawl	weather · wile
warrener	wax	weave
Warrington	waxen	weaver
Warfop	Waxham	web
Warwick	way	webster
wash · bowl	way · faring	wed
wasp	Wayhill	wedding
waspish	waylay	wedge
waspishly	waylayer	Wedley
waspishness	St. Waynard's	wedlock
wassil	wayward	Wedmore
wassilers	way · wiser	Wednesday

W E N

W H E

W H I

weed
weeder
Weedom
week
weekly
weel
ween
weep
weeper
weeping
weevil
weigh
weight
weightily
weightiness
weighty
Welch
Welchpool
welcome
welcomeness
weld
welding-heat
welkin
well
well-a-day
well born
well-bred
well-hole
Wellinborough
Wellington
Wellow
Wem
Wemworthy
Wells and Palace
well set
welt
welter
wemb
wen
wench
wencher

Wendover
Wenlock
went
Wentbridge
wept
were
Weremouth
were-wolf
wesand
Wesel
West
Westbury
Westchester
westerlinefs
westerly
western
Westlow
Westminster
Westmoreland
Weston
Weston-Zaland
Westphalia
Westram
westward
wet wether
Wetherby
wetness
wet-shod
wetted
wey
Weymouth
whale
wharf
wharfage
wharfinger
Whaley
what
Whateley
Whatton
wheal
wheat

M m

wheaten
Wheatly-Bridge
Wheatly-North
wheedle
wheedler
wheel
wheelage
wheelbarrow
wheeler
wheelwright
wheeze
whelk
whelm
whelp
whelpish
whelve
when
whence
whensoever
where
whereas
whereby
wherefore
wherein
whereof
wheresoever
whereto
whereupon
wherewith
Wherwell
wherret
wherry
whet
whether
Whet-stone
whey
wheyish
which
whichsoever
Whicknor
whiff

W H I

whiffler
 whig
 whiggishness
 whiggism
 while
 whiles
 whilom
 whilst
 whim
 whimsical
 whimsically
 whimsicalness
 whimsy
 whim-wham
 whindle
 whine
 whip
 whipper
 whipfaw
 whipster
 whipstaff
 whirl
 whirl-bone
 whirligig
 whirl-pool
 whirl-wind
 wish
 whisk
 whisker
 whiskingly
 whisper
 whisperer
 whist
 whistle
 whistler
 whit
 Whitechurch
 Whit-Down
 whit
 white-heart
 white-liver'd

W H U

white meats
 whiten
 whiteness
 White Parish
 whither
 whithersoever
 whiting
 whitish
 Whitland
 whitlow
 Whitminster
 Whitstable
 whitster
 Whitsunday
 Whitsuntide
 whittle
 Whittlesey
 Whitton
 Whittingham
 Whitwell
 whiz
 who
 whole
 wholly
 wholsom
 wholsomly
 wholsomeness
 whosoever
 whoo
 whoop
 whore
 whoredom
 whoremonger
 whorish
 whorishly
 whorishness
 whorlbat
 whortle
 whose
 whose-soever
 whur

W I L

why
 whick
 wicked
 wickedly
 wickedness
 wicker
 wicket
 Wickliff
 Wickliffians
 Wickomb
 Wickware
 widdle-waddle
 wide
 widely
 widen
 wideness
 widgin
 Widington
 widow
 widower
 widowhood
 width
 wield
 wieldness
 wieldy
 wife
 wig
 Wigan
 Wigborn
 wight
 Wighton
 Wigmore
 Wigton
 Wilcot
 wild
 wild-creature
 wilderness
 wildfire
 wilding
 wildly
 wildness

W I N

W I T

W N N

wife
 Wilfred
 wilful
 wilfully
 wilfulness
 wilily
 williness
 wily
 wilt
 will
 William
 Willing
 willing
 willingly
 willingness
 willow
 Wilmston
 Wilms-comb
 Wiltshire
 wimble
 Wimbleton
 wimple
 Winard
 Wincaunton
 wince
 winch
 Wincheomb
 Winchelsey
 Winchester
 wind
 wind-bound
 winder
 windfal
 Windham
 winding
 windlafs
 Windles
 window
 Windfor & Castle
 windward
 wine

Winfred
 wing
 winged
 wink
 winnow
 Wiony
 Winflow
 Winsom
 Winter
 Winterborn
 winter-green
 winterly
 Winterton & Ness
 wipe
 wire
 wire draw
 Wireham
 Wirksworth
 wisacre
 Wisbich
 wisdom
 wise wisely
 wish
 wishfully
 wisket
 wisp
 wist
 wit
 Witborn
 witch
 witchcraft
 witch-elm
 with
 withal
 Witham
 Witham-South
 Witheridge
 withdraw
 wither
 Witheram
 withhold

withholden
 within
 without
 withsay
 withstand
 withy
 witness
 wittal
 witwal
 Witney
 Wivellcomb
 wizard
 wo
 woad
 Woburn
 Woden
 woe
 woer
 woful
 wofully
 wofulness
 wold
 wolf
 wolf's-bane
 Woller
 Wollet
 Wolrich
 Wolsingham
 wolvis
 woman
 womanishness
 womanly
 womb
 Wombwell
 won
 wonder
 wonderful
 wonderfully
 wonderfulness
 wonderment
 wont

W O R

W R E

Y A R

wood	worshipfully	wrestler
Wootbridge	worshipper	wretch
wooden	Worship	wretched
woodenly	worst	wretchedly
Woodhall	worsted	Wrexham
Woodland	wort	wriggle
Woodley	worth	wright
woodmonger	Worthen	wrinkle
woodpecker	worthily	wring
woodroof	worthiness	wrinkle
Woodstock	worthless	Wrinton
woodiness	worthlessness	wrist
woodward	worthy	wristband
woody	wot	write
woof	Wotton	writer
wool	wove	writhe
woollen	would	writhen
woolly	wound	written
woolstaple	woundily	wrong
Woolwich	wound-wort	wrongful
wop-ey'd	woundy	wrongfulness
Worcester	wrack	wrongfully
word	Wragby	wrote
work	wrangle	wroth
worker	wrangler	Wrotham
workman	wrap	wrought
workmanlike	wrapper	wrung
workmanship	wrapt	wry
Workshop	wrath	wryly
world	wrathful	wry necked
worldly	wrathfully	Wulput
worm	wrathfulness	wyche
worm-eaten	wreak	wydraught
worm-feed	wreath	Wye
Wormshead	wreck	wyven
wormwood	wren	wyver
worn	wrench	
worry	wrest	Yatch
worse	wrestler	yap
worship	wrestling	yar
worshipful	wrestle	yard

Y E O

Y U L

Z O U

yard-arm
 yard-land
 yare
 Yarmouth
 yarn
 Yarrish
 yarrow
 Yarum
 yaspin
 yate
 yaw
 yawl
 yawn
 yaws
 Yaxley
 ye
 yea
 yeau
 year
 yearling
 yearly
 yeast
 yelk
 yell
 yellow
 yellowish
 yellowishness
 yelp
 yelt
 yeoman
 yeomanry
 Yevil

yerk
 yerker
 yern
 yes
 yesterday
 yesternight
 yet
 yew
 yexing
 yield
 yieldingness
 yoke
 yoke-fellow
 yoker
 yon
 yonder
 yonker
 yore
 York
 Yorkshire
 you
 young
 younger
 youngling
 youngster
 your
 youthful
 youthfully
 youthfulness
 yule
 yule-block
 yule game

yule-time
 Z
 Zabulun
 Zacharias
 Zagay
 Zany
 zeal
 zealot
 zealous
 zealously
 zealousness
 Zechariah
 zedoary
 Zealand
 Zell
 Zelotes
 zenith
 Zephyrus
 Zereth
 zelt
 zeta
 Zeugma
 Zink
 zodiac
 zone
 zoography
 zoology
 zootomy
 zoophyte
 Zouch

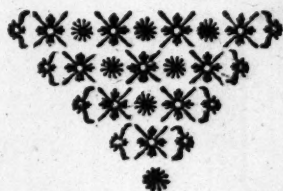
A TABLE of the most familiar Proper Names of
MEN and WOMEN.

A	Abel	Giles	Nathaniel
	Abraham	Gilbert	Nehemiah.
	Alexander	Gregory	Nich olas
	Ambrose	H	O
	Andrew	Henry	Oliver
	Anthony	Horatio	P
	Arnold	Hugh	Patrick
	Arthur	Humphrey	Philip
	Austin	I	Peter
	Augustus	Jacob	R
B	Barnaby	James	Ralph
	Bartholomew	John	Raphael
	Benjamin	Jeffery	Raymond.
	Bernard	Jeremy	Reynold
		Jonathan	Richard
		Joseph	Robert
		Josias	Roger
C	Cæsar	Joshua	Roland
	Charles	Isaac	S
	Christopher	Jude	Samuel
	Clement	Julian	Samson
	Constantine	L	Sebastian
		Lambert	Sigismond
D	Daniel	Lancelot	Silvester
	David	Laurence	Simeon
	Dennis	Leonard	Simon
	Dunstan	Leopold	Solomon
		Lewis	T
E	Edmund	Luke	Theodore
	Edward	M	Theodosius
	Eleazar	Malachy	Theophilus
	Elias	Mark	Thomas
		Martin	Timothy
F	Ferdinand	Matthias	Toby
	Francis	Matthew	V
	Frederick	Maurice	Valentine
		Michael	Vincent
G	Gabriel	Moses	Urban
	George	N	Z
	Gervas	Nathan	Zachary

NAMES of WOMEN.

A	E	Margaret
Abigail	Eleanor	Margery
Alice	Elizabeth	Mary
Agnès	Esther	Martha
Amelia	F	Maud
Ann	Flora	P
Arabella	Frances	Penelope
B	G	Phyllis
Barbara	Gertrude	Priscilla
Beatrice	Grace	Prudence
Betty	H	R
Bridget	Hellen	Rachel
C	Henrietta	Rebecca
Caroline	I	Rosalmond
Catherine	Jane	Rose
Cecily	Joan	S
Charlot	Isabel	Sarah
Christian	Judith	Sophiah
Constance	L	Susanna
D	Laura	T
Damaris	Louisa	Theresa
Deborah	Lucy	U
Diana	Lucretia	Ursula
Dinah	M	
Dorothy	Magdalen	

F I N I S



W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.



W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.

W. O. W. of W. O. W.

